Performance of Routine Information System Management (**PRISM**)

TOOLKIT

PRISM Tools for Community Health Information Systems

March 2019

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MEASURE Evaluation

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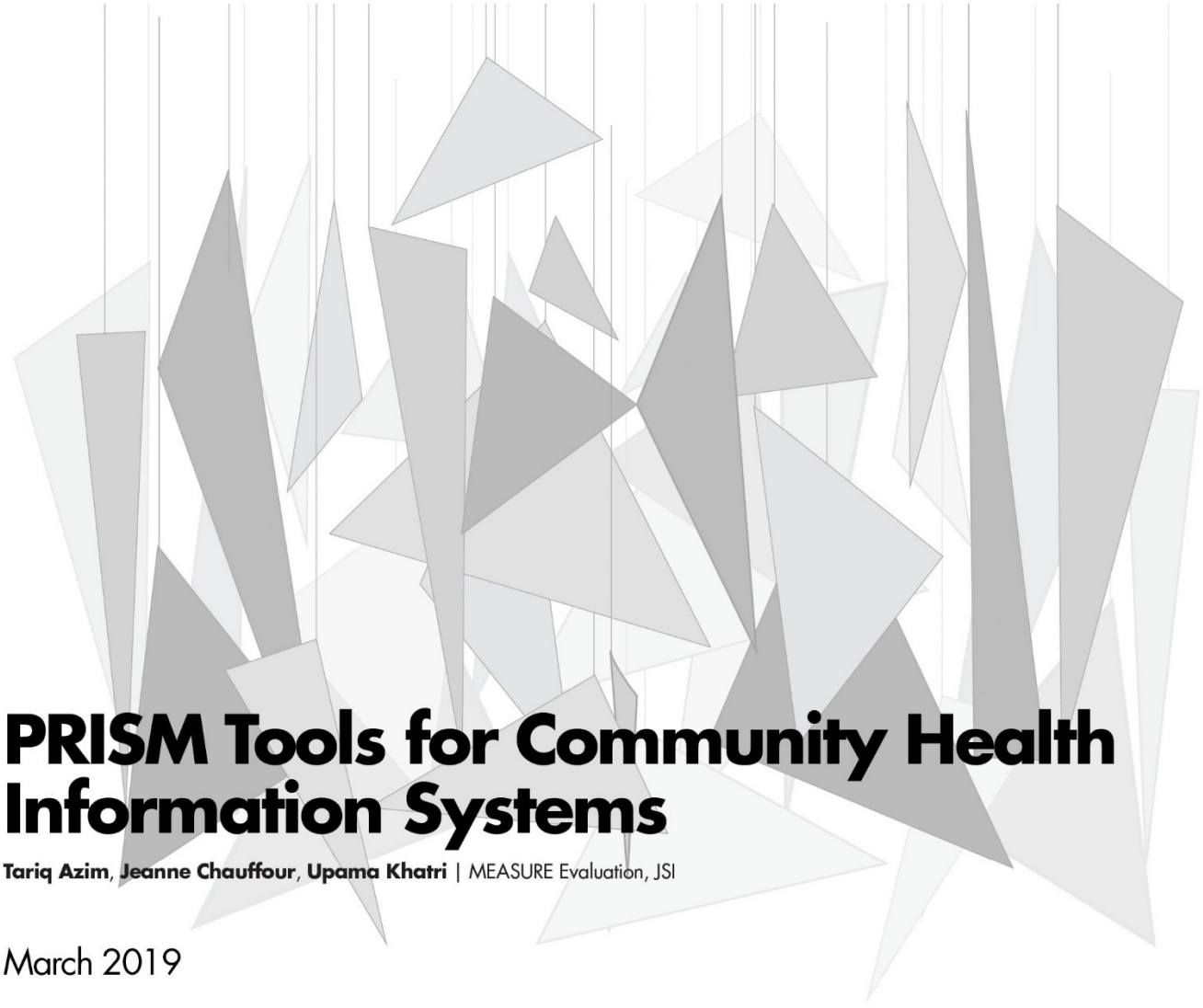

PRISM Tools for Community Health Information Systems

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March 2019

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CONTENTS

FIGURES

ABBREVIATIONS

ANC	antenatal care
ANC1	antenatal care first visit
ART	antiretroviral therapy
CBO	community-based organization
CHIS	community health information system(s)
CHW	community health worker
DHIS 2	District Health Information Software – version 2
DTP3	diphtheria-tetanus-pertussis vaccine third dose (also known as Penta 3)
eCHIS	electronic community health information system(s)
EPI	expanded program of immunization
FP	family planning
GIS	geographic information system
HEW	health extension worker
HIS	health information system(s)
HR	human resource(s)
HRIS	human resource information system
ICT	information and communication technology
IDSR	integrated disease surveillance and response (notifiable diseases)
IMCI	Integrated Management of Childhood Illness
IPT1	intermittent protective therapy first dose
JSI	John Snow, Inc.
LQAS	lot quality assurance sampling
MAT	Management Assessment Tool
MFL	master facility list
MOH	ministry of health
M&E	monitoring and evaluation
N/A	not applicable
NGO	nongovernmental organization
OBAT	Organizational and Behavioral Assessment Tool
OVC	orphans and vulnerable children
PHC	primary healthcare

PRISM	Performance of Routine Information System Management
RDT	rapid diagnostic test
RHIS	routine health information system
SDP	service delivery point
SOP	standard operating procedure
TB	tuberculosis
UN	United Nations
UPS	uninterruptible power supply
USAID	United States Agency for International Development
USB	universal serial bus
WHO	World Health Organization

OVERVIEW OF THE PRISM SERIES

Using data to make evidence-informed decisions is still weak in most low- and middle-income countries. Especially neglected are data produced by routine health information systems (RHIS). RHIS comprise data collected at public, private, and community-level health facilities and institutions. These data, gleaned from individual health records, records of services delivered, and records of health resources, give a granular, site-level picture of health status, health services, and health resources. Most are gathered by healthcare providers as they go about their work, by supervisors, and through routine health facility surveys.

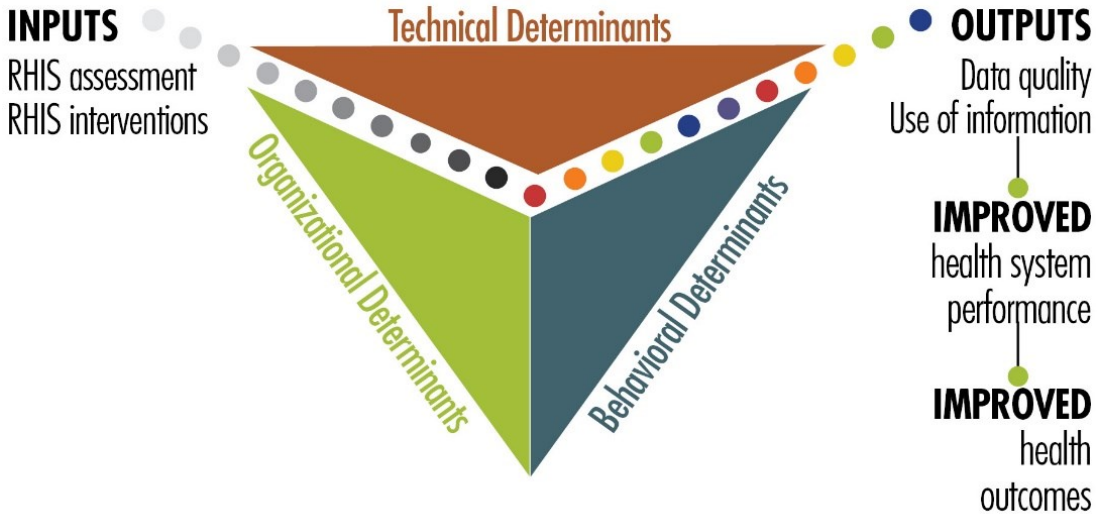
When routine data are lacking, or are not used, the results can be lower-quality services, weak infection prevention and control responses, lack of skilled health workers available where they are needed, and weak supply chains for drugs and equipment. These factors contribute to poor health outcomes for people.

MEASURE Evaluation, which is funded by the United States Agency for International Development (USAID), has provided technical and financial assistance to strengthen RHIS for more than 15 years. We have contributed to best practices at the global level and to the strengthening of RHIS data collection, data quality, analysis, and use at the country level. One of the project's mandates is to strengthen the collection, analysis, and use of these data for the delivery of high-quality health services.

MEASURE Evaluation developed the Performance of Routine Information System Management (PRISM) Framework and suite of tools in 2011 for global use in assessing the reliability and timeliness of an RHIS, in making evidence-based decisions, and in identifying gaps in an RHIS so they can be addressed and the system can be improved. The framework acknowledges the broader context in which RHIS operate. It also emphasizes the strengthening of RHIS performance through a system-based approach that sustains improvements in data quality and use. PRISM broadens the analysis of RHIS performance to cover three categories of determinants that affect performance:

- **Behavioral determinants**: The knowledge, skills, attitudes, values, and motivation of the people who collect, analyze, and use health data
- **Technical determinants**: The RHIS design, data collection forms, processes, systems, and methods
- **Organizational determinants**: Information culture, structure, resources, roles, and responsibilities of key contributors at each level of the health system

Figure 1. PRISM Framework



What the 2018 PRISM Series Offers

With USAID's support, MEASURE Evaluation has revised the PRISM Tools and developed other elements, based on the PRISM Framework, to create a broad array of materials: the "PRISM Series." It's available on the MEASURE Evaluation website (https://www.measureevaluation.org/prism) and has the following components:

- **PRISM Toolkit**
  - PRISM Tools (this is the fundamental manual of the PRISM Toolkit)
  - PRISM Tools to Strengthen Community Health Information Systems (this document)
  - Analysis Tool for Data from a PRISM Assessment
- **PRISM User's Kit** (consisting of four guidance documents)
  - Preparing and Conducting a PRISM Assessment
  - Using SurveyCTO to Collect and Enter PRISM Assessment Data
  - Analyzing Data from a PRISM Assessment
  - Moving from Assessment to Action
- **PRISM Training Kit**
  - Participant's Manual
  - Facilitator's Manual
  - 9 PowerPoint training modules

This new, more comprehensive PRISM Series is useful for designing, strengthening, and evaluating RHIS performance and developing a plan to put the results of a PRISM assessment into action.

The revised "PRISM Tools"—the PRISM Series' core document—offers the following data collection instruments:

RHIS Overview Tool

This tool examines technical determinants, such as the structure and design of existing information systems in the health sector, information flows, and interaction of different information systems. It looks at the extent of RHIS fragmentation and redundancy and helps to initiate discussion of data integration and use.

Performance Diagnostic Tool

This tool determines the overall level of RHIS performance: the level of data quality and use of information. This tool also captures technical and organizational determinants, such as indicator definitions and reporting guidelines, the level of complexity of data collection tools and reporting forms, and the existence of data-quality assurance mechanisms, RHIS data use mechanisms, and supervision and feedback mechanisms.

Electronic RHIS Performance Assessment Tool

This tool examines the functionality and user-friendliness of the technology employed for generating, processing, analyzing, and using routine health data.

Management Assessment Tool

The Management Assessment Tool (MAT) is designed to take rapid stock of RHIS management practices and to support the development of action plans for better management.

Facility/Office Checklist

This checklist assesses the availability and status of resources needed for RHIS implementation at supervisory levels.

Organizational and Behavioral Assessment Tool

The Organizational and Behavioral Assessment Tool (OBAT) questionnaire identifies behavioral and organizational determinants, such as motivation, RHIS self-efficacy, task competence, problem-solving skills, and the organizational environment promoting a culture of information.

Uses of the PRISM Tools

These PRISM tools can be used together to gain an in-depth understanding of overall RHIS performance, to establish a baseline, and to rigorously evaluate the progress and effectiveness of RHIS strengthening interventions every five years, contributing to the national RHIS strategic planning process. Each PRISM tool can also be used separately for in-depth analysis of specific RHIS performance areas and issues.

INTRODUCTION

PRISM Tools for Community Health Information Systems (henceforth PRISM Tools for CHIS) is an adaptation of the PRISM conceptual framework (see Figure 1) and its associated tools for designing, strengthening, and evaluating RHIS performance.

The PRISM conceptual framework emphasizes strengthening RHIS performance through better data quality and improved information use. PRISM broadens the analysis of RHIS performance to include three categories of determinants: behavioral determinants, technical determinants, and organizational determinants (all described in the Overview).

The PRISM framework is as applicable to a community health information system (CHIS) as it is to a national one. PRISM Tools for CHIS is an adaptation of the PRISM Tools specifically intended for evaluating the performance of a CHIS.

Definitions

A **community health information system** has been defined in several ways, depending on the context. Broadly speaking, it can be viewed as a system or collection of systems implemented to support health service delivery at the community level of the health system (IntelliSOFT Consulting Limited, 2013). These systems involve data collection, management, and analysis of health and related services provided to communities outside facilities (de la Torre & Unfried, 2014). They enable information to be shared among community-based services and between community-based services and higher-level health facilities and, in many instances, feed data into the national RHIS (MEASURE Evaluation, 2016).

It is important to acknowledge the heterogeneous characteristics of the community-based health service delivery system and that system's related service delivery systems, of which a CHIS constitutes one building block. Taking this variation into account, a **community health worker** (CHW) is defined both as a paid (either by salary or honorarium) and trained professional who is integrated in the country's health system, or as an unpaid volunteer who receives little, if any, formal training and primarily works on contact-tracing, referrals, and advocacy to support his or her community (Lehmann & Sanders, 2007). We recognize CHWs, as they are defined in *Community-Based Indicators for HIV Programs*, to include "volunteer or non-volunteer community health, extension, or outreach workers as well as volunteers, agents, promoters, or distributors, traditional birth attendants or midwives, social service or case management workers, and the like" (MEASURE Evaluation, n.d.). With the advancement of technology, in some cases, information and communication technology (ICT) may be used for data collection, transmission, and use, whereas in other cases, the information system at the community level is heavily dependent on paper-based or pictorial tools.

Tools

PRISM Tools for CHIS contains the following set of data collection tools to assess a CHIS:

1. **CHIS Overview Tool –** This tool examines the technical determinants of CHIS performance, such as the paper-based and electronic data recording and reporting tools that are in place, their purpose, and the organization that introduced them. It also examines what data are collected in each tool, which helps inform the extent of the CHIS' fragmentation and redundancy, and provides a basis to initiate discussions on data integration and use.

2. **CHIS Performance Diagnostic Tool –** This tool determines the overall level of CHIS performance (i.e., the level of data quality and use of information) by investigating data accuracy, as well as timeliness and completeness of data reporting. It also captures technical and organizational determinants, such as indicator definitions and reporting guidelines, annual planning and data dissemination processes, and the existence of supervision, performance review, and feedback mechanisms.
3. **Electronic CHIS Functionality and Electronic CHIS Usability Assessment Tools –** These tools examine the functionality and the usability of the technological solutions used for generating, processing, analyzing, and using routine health data.
4. **Management Assessment Tool (MAT) –** This tool is designed to take rapid stock of CHIS management practices (such as overall vision, mission, and objectives of the CHIS; CHIS planning and monitoring; capacity building and training, supervisions, and finance) and support the development of action plans for better management.
5. **CHIS Resource Checklist –** This tool assesses the availability and status of resources needed for CHIS implementation at the level of community health-service delivery units (such as health posts, outreach centers, and community clinics) and district levels.
6. **Organizational and Behavioral Assessment Tool (OBAT) –** The OBAT questionnaire identifies behavioral and organizational determinants of RHIS performance, including motivation, confidence, task competence, problem-solving skills, and the organizational environment promoting a culture of information.

The section titled Detailed Overview of the PRISM Tools for CHIS provides a more complete description of the purpose and uses of these tools.

How to Use the PRISM Tools for CHIS

Tool Adaptation, Customization, and Contextualization

In MEASURE Evaluation's experience using PRISM Tools in many countries, the tools are customized or adapted to the local context before they are used. We recommend using all of the PRISM Tools for CHIS during the assessment, to provide a comprehensive picture of the CHIS. However, the assessment can also be tailored to topic areas within each module that address the priorities and needs of the ministry of health (MOH) (e.g., the Supplemental Section at the end of Module 1 in Appendix 3). The tools that are selected should respond to a particular context and will depend on the scope of the activity, timeline, and budget available to support the efforts to improve data quality and data use. This early prioritization will inform the adaptation of the data collection instrument to provide more in-depth information for the indicators that are the most pertinent for the MOH.

Many questions are amenable to country contextualization: for example, which program indicators are useful for checking data accuracy, which reports should be produced at regular intervals, what categories of health personnel a facility should have, and which forms should be used to check staff availability. These decisions should be made before a PRISM assessment begins and reflected in survey instruments. Applying the RHIS Overview Tool (described on page 11 and available as part of the *PRISM Tools* at this link: https://www.measureevaluation.org/prism) a few months ahead of a PRISM assessment provides sufficient information about the structure and organization of the health information system (HIS) to adapt the generic PRISM Tools for CHIS to the local context. These changes need to be incorporated in the data entry forms.

Assessment Frequency

The complete PRISM Tools for CHIS can be used to obtain an in-depth understanding of overall CHIS performance, to establish a baseline, and to rigorously evaluate the progress and effectiveness of CHIS strengthening interventions every five years, leading to a national CHIS strategic planning process. Nevertheless, given how quickly CHIS data collection changes (e.g., pilots for technological solutions to collect community-based information or new program initiatives that lead to revisions or introductions of updated information systems at the community level), countries or organizations might want to conduct this assessment within a shorter period. Furthermore, each tool can be used separately and more frequently for an in-depth analysis of specific CHIS performance areas and issues.

Before the Assessment: Sampling Methods

For a comprehensive assessment of a CHIS, a sampling plan may be necessary. The basic sampling unit for the PRISM for CHIS assessment is the CHW. The sample is drawn in a stratified manner to select the intended number of CHWs to include in the assessment. The exceptions are the CHIS Overview Tool and the Electronic CHIS Functionality Assessment Tool, which are preferably applied at the central or national level. Certain sections of the assessment tools are administered to CHW supervisors. The CHW supervisors for the CHIS assessment should be the supervisors of those CHWs who have been selected in the sample. The introductory section of each tool includes the recommended sampling method. More detailed information about sampling methods is included in the *PRISM User's Kit: Preparing and Conducting a PRISM Assessment* available at this link: https://www.measureevaluation.org/prism.

After the Assessment: Analysis and Action Planning

The findings from the PRISM for CHIS assessment provide a comprehensive picture of the performance of the CHIS and the determinants influencing that performance. The PRISM for CHIS assessment should lead to the development of an action plan, with the overall goal of strengthening the CHIS. The following steps support the development of an action plan that is owned by relevant stakeholders:

Step 1: Analyze the assessment results. This requires clustering the findings and establishing the relationships among them. For example, low data accuracy (data accuracy or timeliness, as determined by the CHIS Performance Diagnostic Tool) may be related to the existence of multiple, duplicative, and overlapping data systems (as determined by the CHIS Overview Tool), the lack of adequate data collection instruments (as determined by the CHIS Resource Checklist), and/or the lack of relevant personnel and their up-to-date skills (as determined by the MAT and/or the OBAT).

Step 2: Prioritize the issues revealed by the assessment. This requires sharing the analysis with a wider group of stakeholders, conducting a prioritization exercise involving relevant stakeholders, determining the highest-priority issues for action, and taking stock of resources and costs of intended activities, who will commit what, and how those commitments will be monitored. Different criteria can be used to identify high-priority issues. For example, the relative importance or influence of the issue that is affecting the performance of the CHIS; stakeholders' buy-in to solve the problem; the apparent ease or difficulty of addressing the problem; and the time and availability of resources needed to address the issue.

Step 3: Recommend solutions. In-depth analysis and interpretation of the prioritized issue(s) followed by the recommendation of solutions to address the prioritized issue(s).

Step 4: Develop an action plan. Develop a plan of action that specifies the role of stakeholders, the actions required, an estimate of the resources needed, the proposed timeline, the responsible authority/authorities for the implementation of the activity/activities, and defined benchmarks for regular follow-up. A useful resource can be the *PRISM User's Kit: Moving from Assessment to Action* available at this link: https://www.measureevaluation.org/prism.

Step 5: Monitor the implementation of the action plan. Once the action plan has been developed, it must be communicated to all CHIS stakeholders who should be responsible for monitoring the implementation of the action plan.

Summary

The following table summarizes the tools and where and why they are applied across the three levels of the CHIS.

Table 1. Application level and purpose of the PRISM Tools for CHIS

Tools	Assessment Application Level			Assessment Objective			
	Central level	CHW supervisory level	CHW level	Compre-hensive	CHIS structure	CHIS data quality and use	CHIS competency and behavioral assessment
Overview Tool	X			X	X		
Performance Diagnostic Tool		X	X	X		X	
Electronic CHIS Functionality Assessment Tool	X			X	X		
Electronic CHIS Usability Assessment Tool			X	X			
MAT		X	X	X			
Resource Checklist		X	X	X			
OBAT		X	X	X			X

DETAILED OVERVIEW OF THE PRISM TOOLS FOR CHIS

CHIS Overview Tool

Purpose

1. Record all the health information systems for community-level data and the types of data collected by each system.
2. List the recording and reporting tools that CHWs use.
3. Map the various information systems used by CHWs.
4. Identify the potential overlap among these information systems.

Summary of Information Collected

The objective of the CHIS Overview Tool is to **map the information systems that CHWs use**.

The CHIS Overview Tool is used to collect data on the following:

- **CHIS data recording tools (Section 1)**: This section lists the paper-based and electronic data recording and collection tools (i.e., client or patient registers; forms) used at the community level, who introduced them, and the types of information captured.
- **CHIS data reporting tools (Section 2)**: This section lists the paper-based and electronic data transmission tools used by CHWs at the community level of the health system, who introduced them, and the types of data reported. This section also identifies the type of electronic tools used (Excel, Access, District Health Information System – version 2 [DHIS 2], geographic information system [GIS], etc.).

These two sections help identify synergies, redundancies, workload, and levels of fragmentation and integration. They can also help determine the links between systems and understand information flow.

Application Level

The CHIS Overview Tool is used mainly at the central or national level to get an overall picture of the CHIS and the integration or fragmentation of the community-based HIS.

Data Collection Methods

The tool can be applied using any or all of the following methods:

- A review of existing documents, if any, that provides details on the data collection, reporting, and other CHIS tools implemented by such organizations as the MOH, nongovernmental organizations (NGOs), community-based organizations (CBOs), and civil society organizations. For example, this can be a review of the standard operating procedures (SOPs) used in the country.

- Conducting in-depth discussions with the CHIS unit managers, health managers, or program managers from the MOH, NGOs, CBOs, etc. who implement community-based health or related programs and manage CHIS for data collection, reporting, analysis, and use.
- Individual or group discussions with CHWs and their supervisors from different organizations that implement or use the CHIS. We recommend trying to also include actors from the central or national level.

Sampling Methods

To collect data using the CHIS Overview Tool, the sampling approach should be "critical case sampling," which involves selecting a small number of important cases (documents of key informants) to "yield the most information and have the greatest impact on the development of knowledge" (Guetterman, 2015). If there are well-written documents on the CHIS, sampling should involve the review of one or two published by the MOH or other organizations supporting community-based health systems in the country.

If interviews are needed, the sample size should be five to eight critical cases/key personnel (i.e., well-informed CHIS managers and/or CHWs and their supervisors). The number of interviews will depend on how quickly the theoretical saturation point (Guetterman, 2015) is achieved (i.e., when further interviews do not yield any new information on the CHIS data collection and data transmission tools).

In cases where the CHIS assessment evaluates the different information systems used by all community-based health players in the country— information systems that may be managed separately (or independently) by the MOH, NGOs, CBOs, etc. — the respondent and/or documents should be from each of the managing authorities.

Alternatively, the CHIS Overview Tool can be administered in a workshop setting by inviting the appropriate parties knowledgeable on the CHIS (representatives from the MOH and/or other central/local authorities) and letting them know in advance what information they should come prepared to provide.

CHIS Performance Diagnostic Tool

Purpose

1. Identify CHIS data quality and information use issues and challenges.
2. Quantify the level of data quality (i.e., indicator data accuracy, reporting timeliness and completeness), and information use (i.e., accessibility of CHIS data, availability of analyzed data, processes for information use, and use of CHIS data for monitoring and planning).
3. Assess CHIS data management processes.

Summary of Information Collected

Measuring Data Quality

The data quality assessment component of the CHIS Performance Diagnostic Tool quantifies the status of data completeness, timeliness, and accuracy, through an analysis of program indicators. It therefore provides valuable information on the adequacy of community-level data to support planning and monitoring. The tool is aligned with the data verification procedure used in the *Data Quality Review Toolkit* (World Health Organization [WHO], 2017), and is suitable for country contexts where CHWs provide first-level care at the community level and collect data relevant to the programmatic areas reviewed by the tool. In general, the data quality assessment compares the reported value of the selected indicator(s) for a specified reporting period to data recorded by the CHW in the source document. The result is a general estimation of data accuracy for the CHIS, based on the measured accuracy of the indicators included in the assessment.

The CHIS Performance Diagnostic Tool used for assessing CHIS performance at the CHW level (Appendix 3, Module 1) reviews the quality of the following core recommended indicators/data elements:

- **Maternal health**: Number of antenatal care first visit (ANC1)
- **Family planning** (FP): Number of women provided any method of contraception by a CHW

A Supplemental Section at the end of Appendix 3, Module 1 offers the option of also reviewing the quality of the following indicators:

- **Immunization**: Number of diphtheria-tetanus-pertussis vaccine third dose (DTP3) in children under one year of age
- **HIV**: Number of patients currently on antiretroviral therapy (ART)
- **Tuberculosis** (TB): Number of presumptive TB cases referred by a CHW (for screening and diagnosis)
- **Malaria**: Number of rapid diagnostic test (RDT) confirmed cases

The selection of the indicators/data elements to assess data quality ultimately depends on what data CHWs collect and report. Therefore, the assessment team can choose or modify any two or more core indicators, based on the country context. This contextualization takes into account the primary programmatic/service focus area(s) of the CHWs in the local setting (such as delivery of maternal, newborn, and child health [MNCH] related primary healthcare services, nutrition services, advocacy and referral services, orphans and vulnerable children [OVC] program activities, etc.) and the type(s) of data elements included in the recording and reporting tools used by CHWs.

Measuring Information Use

The information use assessment component of the CHIS Performance Diagnostic Tool measures the continuous use of information to learn from past results, guide day-to-day operations, track performance, and ultimately improve service delivery. The assessment focuses on the use of CHIS data for client and service management, analytic report production, visual representation of data, discussion, and decision making based on the data, target setting, planning, and monitoring.

Assessing CHIS Data Management Processes

Throughout both the data quality and data use assessment components, the CHIS Performance Diagnostic Tool also evaluates the following aspects of CHIS data management processes:

- **Data processing, analysis, and presentation**: The availability of national CHIS data management guidelines; use of standard CHIS data collection and reporting tools; data aggregation and reporting practices; and the existence of data analysis and information use mechanisms or processes
- **Data quality check**: The presence of data quality assurance guidelines and tools; clearly assigned roles and responsibilities for data review; and regular internal data quality checks conducted by the CHWs and/or their supervisors
- **Supervision and feedback**: The practice of regular supervision visits and the existence of formal feedback loops to staff involved in data collection as well as regular written feedback to health facilities on their performance and the quality of the data reported

Application Levels

The CHIS Performance Diagnostic Tool consists of two separate surveys. The first is designed to be completed by CHW supervisors and the second is completed by CHWs. Both forms have two subsections to assess data quality and use of information (and both of their related CHIS management processes).

Data Collection Methods

Data should be collected by sequentially asking the questions in the module and recording the answers provided by the CHW and their supervisor, substantiated by document reviews when appropriate (including CHIS reports, electronic databases, planning documents, meeting minutes, feedback reports/notes, and guidelines), particularly when recopying source document data.

Sampling Methods

Sampling depends on the context and purpose of the assessment and the availability of resources to conduct the assessment. In general, if the purpose is to diagnose data quality and information use issues in a relatively small administrative unit (e.g., a small district, a subdistrict, or a small CBO/NGO catchment area), the lot quality assurance sampling (LQAS) method can be applied. A sample of 19 community-based health units (i.e., individual CHWs or health posts/other community-level static centers if CHWs are linked to a service delivery point [SDP]) can be randomly selected.

If the administrative unit is relatively large (e.g., province/state, large district with a large number of CHWs) or if there are multiple units to be assessed, one option is to apply the LQAS method and divide the unit into

five subunits (or supervisory areas). A sample of 19 CHWs (or health posts/other community-level static centers if CHWs are linked to an SDP) can be randomly selected from each subunit. An alternate option is to randomly select 100 CHWs (or health posts/other community-level static centers if CHWs are linked to a SDP) from the larger administrative unit.

In a context where multiple community health systems are managed independently by multiple organizations, each CHIS should be treated independently and assessed (and sampled) separately.

For a national-level assessment, it is advisable to stratify the country into several subunits (e.g., regions/states/provinces) and randomly select 100 CHWs (or health posts/other community-level static centers if CHWs are linked to an SDP) from each of these subunits.

The cluster sampling method can also be applied in the above cases. If this is the preferred method, a design effect needs to be factored in. Usually, a design effect of 1.2 is used, which means that 120 CHWs need to be sampled instead of 100. More detailed information about sampling is included in the *PRISM User's Kit: Preparing and Conducting a PRISM Assessment* available at this link: https://www.measureevaluation.org/prism.

Alternative Data Collection and Sampling Method: Assessment Workshop

Data for the PRISM for CHIS assessment can also be collected using a workshop format. Selected CHWs from the same district or from neighboring districts are brought together at a central location and participate in the assessment. Each CHW is provided the relevant tool and asked to fill out the questionnaire individually. The facilitator(s) ensure(s) active participation of the CHWs and the completion of the tools without influencing the responses of the participating CHWs. The facilitator(s) can be present to provide clarification on what is requested, or can play a more active part and administer the tools and record responses from participants.

The limitations of using a workshop format to conduct the assessment are as follows:

- Data quality checks cannot be performed. To address this, participating CHWs can be asked to bring their data recording tools with them (facilitators should inform CHWs of the time period being assessed). The data are then cross-checked with reports submitted to the next higher level.
- The physical verification of documents, such as meeting minutes, cannot be done to confirm that feedback from the supervisor or decisions made were based on CHIS data. To mitigate this, the participating CHWs can be asked to bring the relevant meeting minutes. Alternatively, cross-checking CHW responses with documents available at supervisory levels can be done to validate the CHW responses.

A workshop format to conduct the assessment has these advantages:

- It is less time-consuming and resource-intensive.
- It can be done during previously scheduled monthly/periodic meetings of the CHWs with their supervisors.
- The availability of a facilitator at a central site to provide clarification on what is requested ensures a consistent understanding of and response to the assessment questions across all CHWs.
- Post-assessment feedback can be provided to the same group of CHWs that participated in the assessment.

To apply this method, the selection of the CHWs can be done in two ways:

Option 1: Cluster sampling

Step 1: Divide 120 (the number of CHWs in the sample) by the average number of CHWs under each supervisor. This will give the number of CHW supervisory areas to be selected randomly from the study area.

Step 2: Once the supervisory areas have been randomly selected, all CHWs from each supervisory area are invited to a central location that is convenient for the CHWs to travel to for the assessment.

Option 2: LQAS

Step 1: Randomly select 5 administrative units.

Step 2: Randomly select 19 CHWs from each administrative unit and invite them to the workshop.

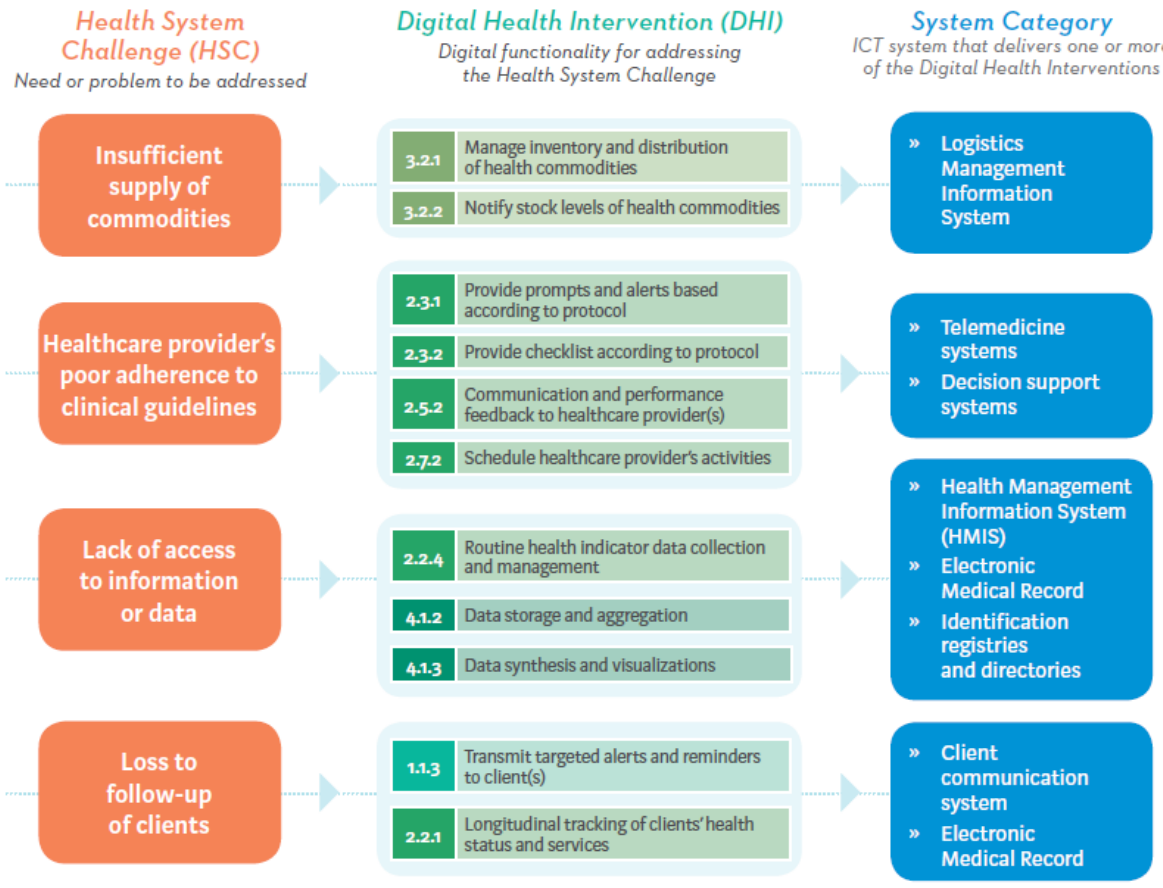
In both cases, all CHW supervisors from the randomly selected supervisory/administrative areas are invited to a separate workshop to complete the assessment tools that are relevant to them.

Electronic CHIS Functionality and Electronic CHIS Usability Assessment Tools

Purpose

With technological advancements in HIS, electronic or digital HIS have become an essential component of routine health data processing, dissemination, and use. These tools assess an electronic CHIS (eCHIS). The use of electronic solutions at the community level varies from country to country depending on which organizations are supporting the electronic system for CHWs, and the level of competency of the CHWs to use an electronic system for data entry and use. Adapting WHO's *Classification of Digital Health Interventions*, Version 1.0, to the CHIS context (WHO, 2018), these assessment tools examine the functionality and usability of the eCHIS for supporting CHWs in RHIS data collection and management and, if applicable, as a mechanism to support client/patient management and work planning, and as job aids.

Figure 2. Classification of digital health interventions



Source: World Health Organization, 2018

The eCHIS Assessment Tools have the following purposes:

1. Evaluate how well the eCHIS is designed in the context of the desired tasks that the system is expected to perform (**system functionality**).
2. Assess how well the CHWs are able to use the system to carry out those functions or tasks (**system usability**).

Summary of Information Collected

The primary domains (WHO, 2018) for the assessment of the functionality and usability of electronic HIS solutions used by CHWs are:

- Client identification and registration
- Client health records and/or family folder
- CHW decision support/job aids
- CHW communication with higher-level service providers
- Referral coordination
- CHW activity planning and scheduling

It is understood that not every electronic health solution used by CHWs will have all the features listed above. Nevertheless, the assessment of the presence or absence of these features gives an indication of the level of advancement of system design. Only the applicable section(s) should be used based on the features that are offered by the system to assess the functionality and usability of the digital HIS used by CHWs.

Application Levels

The functionality of the eCHIS used by CHWs is assessed at the central level against the functions desired/intended by the MOH or other relevant authority.

The usability of the eCHIS is assessed at the CHW level where the CHWs use the system for data entry, service delivery, data aggregation, transmission, and/or analysis.

Data Collection Methods

The system's functions are examined by experts against the conceptual design of the electronic system, as defined in relevant documents available to the implementing agency/organization (e.g., MOH, NGOs, implementing partners, and CBOs). The questions in the eCHIS Functionality Assessment Tool are generic for any digital HIS used by CHWs, are based on global standards set forth in the WHO's *Classification of Digital Health Interventions*, and can be customized accordingly. This tool is in the supplemental section of the Central-Level Assessment.

Data on usability are collected through systematic observation of the relevant tasks carried out by CHWs using the electronic system. This tool is in the CHW-Level Assessment.

Sampling Methods

The sample size needed for an assessment of the usability of the eCHIS depends on the reason for wanting to conduct this assessment. If the purpose is to confirm the CHWs' capability (proof of concept) to use the eCHIS, a sample of 19 CHWs selected using the LQAS method in a supervisory area is sufficient. For a more robust assessment, a sample of 100 CHWs using the eCHIS is desirable. All the eCHIS in use in the country or managed by the organizations included in the assessment should be assessed separately.

Management Assessment Tool (MAT)

Purpose

This tool is designed to take rapid stock of CHIS management practices and to aid the development of recommendations for better CHIS management. It is used to carry out the following tasks:

1. Assess the level of CHIS management functions, such as governance, planning, training, supervision, quality standards, and finance.
2. Identify the CHIS management functions that are weak and set priorities for action.
3. Conduct comparative analysis to understand the effects of the management functions on CHIS performance, CHIS processes, the promotion of a culture of information, and behavioral determinants.

Summary of Information Collected

The MAT is primarily used at district and higher levels of the health system (administered to CHW supervisors) to measure the effectiveness of the following CHIS management functions:

- **CHIS governance**: The organizational arrangements, mission, roles, and functions related to the CHIS; the presence of SOPs that form part of the organizational culture of the health sector; and a description of who is doing what, how, and with what resources to manage and maintain the CHIS
- **Planning**: The availability of a copy of a multiyear national, regional, or district HIS/CHIS plan and targets for improving CHIS data quality and information use
- **Training**: The presence of a national- or subnational-level CHIS training needs assessment and training plan with training manuals
- **Supervision**: The presence of CHIS supervision guidelines, checklists, and plans; supervision frequency and feedback; checking data quality; using data for discussion and to help in decision making
- **Finance**: The availability of financial resources dedicated to the CHIS (to cover supply, training, and supervision costs)

Application Levels

The MAT has two forms: one completed by the CHW supervisor and a shorter one completed by the CHW.

Data Collection Methods

Data are collected by recording the respondent's answers and reviewing the following documents: office organogram, HIS/CHIS plans and reports, SOPs, training plans and manuals, supervision tools, plans, and feedback reports/notes, and financial plans/reports, etc.

Sampling Methods

To assess the management functions, a sample of 19 CHWs selected using the LQAS method in a supervisory area would suffice. For a more robust assessment, a sample of 100 CHWs is desirable. The supervisors of the sampled CHWs are also interviewed.

CHIS Resource Checklist

Purpose

The checklist consists of an inventory of available resources, such as equipment, utilities, storage of information, communication capability, and CHIS forms and registers. The checklist is designed to:

1. Assess the availability of resources.
2. Monitor the availability of resources over time.
3. Make management decisions to replenish resources.
4. Develop recommendations to deal with resource issues.

Application Levels

The checklist has two forms: one completed by the CHW supervisor and a shorter one completed by the CHW.

Summary of Information Collected

The checklist is used at health facilities, district offices, or higher levels where the CHW supervisor and the CHW are stationed to assess resource availability:

- **CHIS hardware/equipment**: The availability of working digital equipment (such as a computer, printer, modem, uninterruptible power supply [UPS], backup unit, and communications equipment)
- **CHIS infrastructure**: The availability of consistent electricity and backup power, access to the Internet, storage facility, and so forth
- **CHIS supplies**: The availability of CHIS data collection and reporting forms
- **Human resources** (HR): Staffing level (number and type of staff at the facility or office level) and staff trained in the CHIS

Data Collection Methods

Data can be collected via key informant interviews with the CHW and the CHW supervisor or RHIS/CHIS officer at the health facility or district health office and through desk reviews and office tours (for the equipment inventory).

Sampling Methods

To assess CHIS resources and inventory, a sample of 19 CHWs selected using the LQAS method in a supervisory area would suffice. For a more robust assessment, a sample of 100 CHWs is desirable. The supervisors of the sampled CHWs are also interviewed.

Organizational and Behavioral Assessment Tool (OBAT)

Purpose

Assess whether organizational mechanisms are in place to produce the desired results in CHIS performance. More specifically, the OBAT helps to:

1. Explore the level of existence of a culture of information in the organization.
2. Identify the commitment and support of upper management for enhancing the CHIS.
3. Quantify the CHWs' motivation, knowledge, and skills to perform data-related tasks.

Summary of Information Collected

To assess the level and promotion of a **culture of information**, the OBAT has respondents share their impressions about the following criteria regarding their work environment:

- Emphasis on data quality
- Emphasis on data accessibility and dissemination
- Use of community data for decision making (e.g., for planning, problem solving, day-to-day operations, case management, supervision, and monitoring)
- Feedback mechanisms between the CHWs and their supervisors
- Sense of responsibility about data among the CHWs
- Empowerment and accountability
- Performance management and incentives
- Communication with and involvement of community members

To assess respondents' **behavior**, the OBAT helps evaluate the following:

- Perception of self-competency to perform data-related tasks
- Intentions to perform data-related tasks and use community-level data
- Knowledge of the CHIS (including rationale for data collection and how to perform data quality checks)
- Skill to perform data-related tasks (such as the identification of problems and problem solving, visually presenting data, interpretation, and evidence-based decision making)
- CHW motivation

There is also a supplemental section about competency to improve data quality within the OBAT questionnaire administered at the CHW level.

Application Levels

The OBAT has two questionnaires: one for CHW supervisors and one for CHWs.

Data Collection Methods

Paper-and-pencil-based self-assessments are administered to CHW supervisors (at the facility, district, or CBO) and to CHWs. If the CHW is facing literacy obstacles or language barriers, the enumerator may administer the questionnaire.

Sampling Methods

The OBAT questionnaire can be administered separately or along with the CHIS Performance Diagnostic Tool and other tools. The sampling of the CHWs and the CHW supervisors is the same as for those other tools.

If only the organizational and behavioral determinants of the CHIS are being assessed, the sampling depends on the context and purpose of the assessment and the availability of resources for conducting the assessment. In general, if the purpose is to diagnose data quality and information use issues in a relatively small administrative unit (e.g., a small district, a subdistrict, or a small CBO/NGO catchment area), the LQAS method can be applied. A sample of 19 community-based health units (individual CHWs or health posts/other community-level static centers if CHWs are linked to an SDP) can be randomly selected.

If the administrative unit is relatively large (e.g., province/state or a large district with a large number of CHWs) or if multiple units will be assessed, one option is to apply the LQAS method and divide the unit into five subunits (or supervisory areas). A sample of 19 CHWs (or health posts/other community-level static centers if CHWs are linked to an SDP) can be randomly selected from each subunit. An alternate option is to randomly select 100 CHWs (or health posts/other community-level static centers if CHWs are linked to an SDP) from the larger administrative unit.

In a context where multiple community health systems are managed independently by several organizations, each CHIS should be treated independently and assessed (and sampled) separately.

For a national-level assessment, it is advisable to stratify the country into several subunits (e.g., regions/states/provinces) and randomly select 100 CHWs (or health posts/other community-level static centers if CHWs are linked to an SDP) from each of these subunits.

The cluster sampling method can also be applied in the above cases. If that is the preferred method, a design effect needs to be factored in. Usually, a design effect of 1.2 is used, meaning that instead of 100 CHWs, 120 CHWs are needed for the assessment. More detailed information about sampling is included in the *PRISM User's Kit: Preparing and Conducting a PRISM Assessment* available at this link: https://www.measureevaluation.org/prism.

For the sampling of the CHW supervisors, only those who are the direct supervisors of the sampled CHWs should be selected.

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APPENDIX 1. CENTRAL-LEVEL ASSESSMENT

Premodule: Background Information and Verbal Consent

SURVEY FACILITATOR		
CLA_01	Survey date	
CLA_02	Facilitator name	
CLA_03	Facilitator code Please enter your 2-character identifier	☐☐
RESPONDENT AND UNIT IDENTIFICATION		
CLA_04	Type of unit	1. Central/national office 2. Regional/provincial office 3. District office 4. Health facility 96. Other (specify) _____
CLA_05	Managing authority	1.Government/public 2. NGO/not-for-profit 3. Private-for-profit 4. Mission/faith-based 96. Other (specify) _____
CLA_06	Unit name to which the respondent belongs	
CLA_07	Location of the unit	1. Urban 2. Rural
CLA_08	Job title of the respondent	1. National manager 2. Regional manager 3. District health manager 4. CHW supervisor 96. Other (specify) _____

INFORMED CONSENT

READ THE FOLLOWING TEXT TO THE RESPONDENT:

Good day! My name is _____. We are here on behalf of [*IMPLEMENTING AGENCY*] conducting a survey to help the government know more about how the community health information system in [*COUNTRY*] is performing.

Your unit was selected to participate in this study. We will be asking you questions about the health services and the reporting of those services. This information may be used by [*MOH AND/OR IMPLEMENTING AGENCY*], organizations supporting services at the community level, and researchers, to plan service improvement or to conduct more studies of health services.

Neither your name nor the names of any other respondent participating in this study will be included in the data set or in any report. However, there is a small chance that any of these respondents may be identified later. Nevertheless, we are asking your help to ensure that the information we collect is accurate.

You may refuse to answer any question or choose to stop the interview at any time. However, we hope you will answer all of the questions, which will benefit the clients you serve and the nation.

If there are questions that would be more accurately answered by someone better informed of any specifics we ask about, we would appreciate if you would introduce us to that person to help us collect any missing or incomplete information.

At this point, do you have any questions about the study? Do I have your agreement to proceed?

_____ _____ / _____ / _____

INTERVIEWER'S SIGNATURE INDICATING CONSENT OBTAINED DAY MONTH YEAR

CLA_09	May I begin the interview?	1. Yes 2. No → **End survey**

RESPONDENT BACKGROUND		
CLA_10	Sex	1. Male 2. Female 3. Other/prefer not to answer
CLA_11	Highest level of formal education achieved (select one)	1. None 2. Primary/elementary (not completed) 3. Primary/elementary (completed) 4. Secondary/high school (not completed) 5. Secondary/high school (completed) 6. Postsecondary or higher
CLA_12	Years of employment in current role	
CLA_13	Years of working with health data or the CHIS	

Module 1. CHIS Overview Tool

COT_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

COT_001	Does the CHW maintain every record on the services he or she provides?	1. Yes → **Go to COT_003** 2. No
COT_002	If *no*, does the CHW's supervisor record the data from the community level?	1. Yes 2. No → **End survey**
COT_003	What is/are the nature of the recording tools?	1. Paper-based only 2. Electronic only 3. Both paper-based and electronic 4. N/A → **Go to Section 2**

SECTION 1. PAPER-BASED AND ELECTRONIC DATA RECORDING TOOLS

To complete the following table, ask for copies of the data recording tools or check whether a procedures manual listing all the data recording tools is available.
1. List all existing data recording tools (e.g., patient registers and forms) in the rows of the first column (S1_01). **2.** Indicate by "P", "E", or "B" if the tool is paper-based, electronic, or both (S1_02). **3.** Verify whether a given recording tool has the listed type of service or disease information and place an "X" in the corresponding column for that tool's row (S1_03). **4.** Indicate with an "X" the organization that introduced the tool (S1_04).

S1_01. Name of the paper-based register/form used for data recording OR **Name of the electronic system used for data recording**	**S1_02. Paper, electronic, or both?** *(Mark P, E, or B)*	**S1_03. Purpose (type of information reported)**																**S1_04. Organization/body that introduced the register/form (interested in the primary organization)**						
		1. Individual or household demographic data	2. Immunization services	3. Family planning services	4. Maternal health services*	5. Child health services **	6. Tuberculosis	7. HIV/AIDS nonclinical services ***	8. HIV/AIDS clinical services ****	9. Malaria	10. Other specific disease(s)	11. Nutrition services	12. Notifiable diseases/IDSR	13. Medicines, vaccines, contraceptive	14. Equipment	15. Vital events (births)	16. Vital events (deaths)	17. Other (specify)	1. MOH (standardized HIS tool)	2. MOH (program-specific: name)	3. United Nations (UN) agency (name)	4. Regional or state government	5. Other partner or donor (name)	6. Local innovation	7. Other (specify)

* **4. Maternity Health Services:** Pregnancy care, antenatal (ANC) care, delivery, postnatal care, etc.
** **5. Child health services:** Other than immunization and nutrition – e.g., Integrated Management of Childhood Illness (IMCI), pneumonia, diarrhea, measles, etc.
*** **7. HIV/AIDS nonclinical services:** OVC, care and support of people living with HIV (PLHIV)
**** **8. HIV/AIDS clinical services:** ART, provider-initiated counseling and testing, prevention of mother-to-child transmission of HIV (PMTCT)

SECTION 2. DATA REPORTING TOOLS MAPPING SHEET

To complete the following table: **1.** List all the reporting tools in the rows of the first column (S2_01). **2.** Describe the type of tool (S2_02), and if electronic, write its origin (S2_03). **3.** Verify whether a given reporting tool has the listed type of service or disease information and place an "X" in the corresponding column for that tool's row (S2_04). **4.** Indicate with an "X" the organization that introduced the tool (S2_05).

S2_01. Name of the report generated by the CHW and their immediate supervisor	**S2_02. Paper-based, electronic, or both?** *(Mark P, E, or B)*	**S2_03. If electronic, type of electronic system** (e.g., Excel, Access, DHIS 2, GIS, etc.)	**S2_04. Type of data reported**														**S2_05. Organization/body that introduced the report**						
			1. Immunization services	2. Family planning services	3. Maternal health services	4. Child health services (IMCI)	5. Tuberculosis	6. HIV/AIDS (clinical /nonclinical)	7. Malaria	8. Other specific disease(s)	9. Nutrition services	10. Notifiable diseases/IDSR	11. Medicine, vaccines, contraceptive stock	12. Human resources	13. Equipment	14. Vital events	15. Other (specify)	1. MOH (standardized HIS tool)	2. MOH (program- specific: name)	3. UN agency (name)	4. Regional/state government	5. Other partner/donor (name)	6. Local innovation	7. Other (specify)

COT_102	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Supplemental Module. Electronic CHIS Functionality Assessment Tool

EFA_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

EFA_001	Does the CHW use an electronic community health information system (eCHIS)? *Provide a definition*: The eCHIS is the community-based electronic health information system used by the CHW. It may have different names and functions depending on the local context.	1. Yes 2. No → **End survey**
EFA_002	Is the eCHIS used for individual/household data and/or for aggregate data?	1. Individual or household data only 2. Aggregate data only 3. Both individual/household and aggregate data
EFA_003	Where is the eCHIS hosted?	1. Health facility level 2. District office 3. Regional office 4. National/central office

UNIQUE IDENTIFIERS FOR HEALTH FACILITIES AND HEALTH ADMINISTRATIVE UNITS		
EFA_004	Are individual CHWs or are the community-based service delivery points (SDPs) included in the master facility list (MFL)/human resource information system (HRIS)?	1. Yes 2. No → **Go to EFA_006**
EFA_005	If *yes*, is there a working mechanism to keep the master list of CHWs updated?	1. Yes 2. No
EFA_006	Does the national CHIS software use unique identifiers for the CHWs?	1. Yes 2. No → **Go to EFA_008**
EFA_007	If *yes,* is there a framework or agreement in place such that those unique identifier lists are available for general use by other programs, e.g., human resources (HR), logistics, financial, partners, etc.?	1. Yes 2. No
EFA_008	Is the eCHIS used by CHWs linked to the national MFL/HRIS?	1. Yes → **Go to EFA_010** 2. No
EFA_009	If *no*, is there a built-in CHW list in the eCHIS that acts as a master list of CHWs?	1. Yes 2. No

INDIVIDUAL OR HOUSEHOLD DATA: POINT OF CARE DATA ENTRY		
If the CHW is using an electronic system that allows data entry during individual encounters with the client/patient at the point of care/service, use the following tool to assess the basic functionality of the electronic system used by the CHWs. **If the answer to EFA_002 is "1" or "3," (i.e., the eCHIS is used for individual or household data only or along with aggregate data), fill out sections EFA-A to EFA-F.** **If the answer to EFA_002 is "2" (aggregate data only), only fill out section EFA-G.**		
SECTION EFA-A: CLIENT IDENTIFICATION AND REGISTRATION		
EFA_010	Does the system feature a mechanism to register an eligible client?	1. Yes 2. No → **Go to Section EFA-B**
EFA_011	If *yes*, does the system assigns a unique ID to the client upon registration?	1. Yes 2. No
EFA_012	Can the system retrieve client data using the unique ID or other identification data?	1. Yes 2. No
SECTION EFA-B: CLIENT HEALTH RECORDS		
EFA_013	Does the system feature client health records (general or program-specific [e.g., pregnancy care records, child health records])?	1. Yes 2. No → **Go to Section EFA-C**
EFA_014	If *yes*, does the system allow longitudinal tracking of the client's health status and services received?	1. Yes 2. No
SECTION EFA-C: CHW DECISION SUPPORT/JOB AIDS		
EFA_015	Does the system feature CHW decision support/job aids?	1. Yes 2. No → **Go to Section EFA-D**
EFA_016	If *yes*, does a checklist exist within the eCHIS to enter data, based on a national service delivery protocol (e.g., for pregnant women, child immunization, family planning [FP] services)?	1. Yes 2. No
EFA_017	Does the system provide alerts or prompts according to the service protocols?	1. Yes 2. No

SECTION EFA-D: CHW COMMUNICATION WITH OTHER HEALTHCARE PROVIDERS AND SUPERVISORS		
EFA_018	Does the system feature a mechanism for CHWs to communicate with other healthcare providers and supervisors?	1. Yes 2. No → **Go to Section EFA-E**
EFA_019	If *yes*, can the data (e.g., data on individual household member, pregnant woman, child immunization, and FP services) entered by the CHW be accessed by other healthcare providers and supervisors?	1. Yes, by other CHWs (i.e., peers) assigned to the same catchment population (or geographic/ administrative area) 2. Yes, by healthcare providers at primary healthcare (PHC)-level facilities serving the same catchment population/ administrative area Name of the PHC facility: _____ 3. Yes, by immediate supervisors 4. Yes, by district-level supervisors 5. No
SECTION EFA-E: REFERRAL COORDINATION		
EFA_020	Does the system feature a mechanism for referral coordination?	1. Yes 2. No → **Go to Section EFA-F**
EFA_021	If *yes*, does an electronic information system exist for use at the point of service (i.e., client/patient data are entered in the electronic system at the point of service at the PHC unit)?	1. Yes 2. No → **Go to EFA_023**
EFA_022	If *yes*, is the electronic information system linked with a unit-based electronic system used at the PHC facilities in the same catchment population/administrative area?	1. Yes 2. No
EFA_023	Can CHWs electronically send information to the referral facility?	1. Yes 2. No
EFA_024	Can the referral facility assess and update the electronic data on the client/patient referred by the CHW?	1. Yes 2. No → **Go to Section EFA-F**
EFA_025	If *yes*, can CHWs assess and review the data updated by the referral facility, to confirm that the service was provided to the client/patient referred by the CHWs?	1. Yes 2. No

SECTION EFA-F: CHW ACTIVITY PLANNING AND SCHEDULING		
EFA_026	Does the system feature a mechanism for CHW activity planning and scheduling?	1. Yes 2. No → **Go to Section EFA-G**
EFA_027	If *yes*, does the CHW prepare her/his activity plans and work schedules (e.g., monthly household/outreach visit schedule) using the electronic system?	1. Yes 2. No → **Go to Section EFA-G**
EFA_028	If *yes*, can the CHW supervisor access the CHW's activity plan and schedule and prepare his/her own activity plan or schedule?	1. Yes 2. No 3. N/A

SECTION EFA-G: AGGREGATE REPORTING USING THE eCHIS		
If the CHW is using an electronic system that allows aggregate data entry, use the following tool to assess the basic functionality of the electronic system used by the CHWs. **If the answer to EFA_002 is <u>not</u> "2" or "3" (aggregate data only or along with individual/household data), skip to EFA_032.**		
EFA_029	What eCHIS does the CHW use for aggregate data entry or compilation?	1. National open-source data processing system (e.g., DHIS 2) 2. National proprietary software 3. Excel-based spreadsheet 4. Access-based data processing module 96. Other (specify) _____
EFA_030	Does the eCHIS allow automated generation of routine aggregate reports that the CHW has to submit to the higher level?	1. Yes 2. No → **Go to EFA_032**
EFA_031	If *yes*, are the aggregate reports generated by the system electronically uploaded into the national RHIS (e.g., DHIS 2-based national health management information system)?	1. Yes 2. No

CHIS DATA DISAGGREGATION AND ANALYSIS			
EFA_032	Select two indicators from the national CHIS		
	01	Indicator 1 _____	
	02	Indicator 2 _____	
EFA_033	Does the eCHIS allow users to present data in time-trend graphs? Check whether the two indicators are in a time-trend graph.		
	01	Indicator 1	1. Yes, observed 2. No
	02	Indicator 2	1. Yes, observed 2. No
EFA_034	Does the eCHIS allow users to visualize data using graphs, in order to compare indicators or to compare villages/subunits? Check whether the two indicators use graphs for comparison.		
	01	Indicator 1	1. Yes, observed 2. No
	02	Indicator 2	1. Yes, observed 2. No

DATA INTEGRATION		
EFA_035	Are other parallel community-based (disease- or program-specific) software applications in use (e.g., logistics, IDSR, etc.)?	1. Yes 2. No → **Go to EFA_042**
EFA_036	If *yes*, is a parallel community-based **logistics** software application in use?	1. Yes 2. No → **Go to EFA_038**
EFA_037	If *yes*, does the CHIS software have or integrate with logistics information?	1. Yes 2. Yes, partially (it is integrated or interoperates with part of the parallel system) 3. No
EFA_038	Is a parallel community-based **notifiable diseases or integrated disease surveillance and response (IDSR)** software application in use?	1. Yes 2. No → **Go to EFA_040**
EFA_039	If *yes*, does the CHIS software have or integrate with the IDSR (notifiable diseases) information?	1. Yes 2. Yes, partially (it is integrated or interoperates with part of the parallel system) 3. No

EFA_040	Is there **another** parallel community-based software application in use? If *yes*, please provide its name. If *yes*, name: _____	1. Yes 2. No → **Go to EFA_042**
EFA_041	If *yes*, does the CHIS software have or integrate with the other software that you specified? Specify name again here: _____	1. Yes 2. Yes, partially (it is integrated or interoperates with part of the parallel system) 3. No

AGE AND SEX DISAGGREGATED DATA		
EFA_042	Does the eCHIS generate reports that are disaggregated by age?	1. Yes 2. No
EFA_043	Does the eCHIS generate reports that are disaggregated by sex?	1. Yes 2. No

CHIS REPORTING		
The following section relates to the **national/organizational/central-level electronic HIS,** where aggregate data from the community-level electronic health information systems (i.e., the eCHIS used by the CHWs) are uploaded and processed.		
EFA_044	Does a national/central-level electronic HIS exists for managing routine health data, including community-level data?	1. Yes 2. No → **End survey**
EFA_045	If *yes*, does the national/central-level HIS software allow users to determine the number and percentage of monthly CHW reports received out of the total number of expected reports from the CHWs?	1. Yes 2. No
EFA_046	Does the national/central-level HIS software allow users to analyze the trend in reporting completeness for a year by CHWs? (Does the system enable users to identify which CHW has recurring reporting problems?)	1. Yes 2. No
EFA_047	Does the national/central-level HIS software allow users to determine the number and percentage of reports from the CHWs that were received on time?	1. Yes 2. No
EFA_048	Does the national/central-level HIS software generate summary reports (based on CHW data only) for the different levels and periods?	1. Yes 2. No
EFA_049	Are the CHW data aggregated in the national CHIS software in a way that CHW data can be separately aggregated and analyzed?	1. Yes 2. No → **Go to EFA_051**

EFA_050	If *yes,* pick <u>one</u> indicator (e.g., maternal and child health or FP) and observe whether the national system can generate aggregate reports using CHW data <u>only</u>. In many cases, however, the system should be able to generate aggregate reports for all indicators using a national standard format. Choose any of these two approaches to observe whether the national electronic HIS can generate aggregate reports using CHW data. **(OBSERVE AND TICK ACCORDINGLY)**				
	Levels:	**Monthly (A)**	**Quarterly (B)**	**Annual (C)**	**Custom (D)**
01	National				
02	Regional				
03	District				
04	Health facility				
05	Community SDP				

POPULATION ESTIMATES AND COVERAGE CALCULATION				
EFA_051	Does the national/central-level HIS software include population estimates to calculate denominators?			1. Yes 2. No → **End survey**
EFA_052	Can the system calculate the CHWs' share of coverage for:			
	01	ANC1	1. Yes, observed 2. No	→ **End survey** (if all are *no*)
	02	Deliveries at health facilities	1. Yes, observed 2. No	
	03	Measles coverage	1. Yes, observed 2. No	
EFA_053	If *yes (observed)*, for which levels are they available?			
	01	Region	1. Yes, observed 2. No	
	02	District	1. Yes, observed 2. No	
	03	Facility	1. Yes, observed 2. No	
	04	Community-level SDP	1. Yes, observed 2. No	

EFA_102	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

APPENDIX 2. COMMUNITY HEALTH WORKER SUPERVISOR-LEVEL ASSESSMENT

Premodule: Background Information and Verbal Consent

SURVEY FACILITATOR		
SLA_01	Survey date	
SLA_02	Facilitator name	
SLA_03	Facilitator code Please enter your 2-character identifier	☐☐
RESPONDENT AND UNIT IDENTIFICATION		
SLA_04	Type of unit	1. Central/national office 2. Regional/provincial office 3. District office 4. Health facility 5. Community-level unit/health post/outreach center 96. Other (specify) _____
SLA_05	Managing authority	1. Government/public 2. NGO/not-for-profit 3. Private-for-profit 4. Mission/faith-based/CBO 96. Other (specify) _____
SLA_06	Unit name to which the respondent belongs	
SLA_07	Location of the unit	1. Urban 2. Rural
SLA_08	Job title of the respondent	1. CHW supervisor 96. Other (specify) _____

INFORMED CONSENT		
READ THE FOLLOWING TEXT TO THE RESPONDENT: Good day! My name is _____. We are here on behalf of [*IMPLEMENTING AGENCY*] conducting a survey to help the government know more about how the community health information system in [*COUNTRY*] is performing. Your unit was randomly selected to participate in this study. We will be asking you questions about the health services and the reporting of those services. This information may be used by [*MOH AND/OR IMPLEMENTING AGENCY*], organizations supporting services at the community level, and researchers, to plan service improvement or to conduct more studies of health services. Neither your name nor the names of any other respondent participating in this study will be included in the data set or in any report. However, there is a small chance that any of these respondents may be identified later. Nevertheless, we are asking your help to ensure that the information we collect is accurate. You may refuse to answer any question or choose to stop the interview at any time. However, we hope you will answer all of the questions, which will benefit the clients you serve and the nation. If there are questions that would be more accurately answered by someone better informed of any specifics we ask about, we would appreciate if you would introduce us to that person to help us collect any missing or incomplete information. At this point, do you have any questions about the study? Do I have your agreement to proceed? _____ _____ / _____ / _____ INTERVIEWER'S SIGNATURE INDICATING CONSENT OBTAINED DAY MONTH YEAR		
SLA_09	May I begin the interview?	1. Yes 2. No → **End survey**

RESPONDENT BACKGROUND		
SLA_10	Sex	1. Male 2. Female 3. Other/prefer not to answer
SLA_11	Highest level of formal education achieved	1. None 2. Primary/elementary (not completed) 3. Primary/elementary (completed) 4. Secondary/high school (not completed) 5. Secondary/high school (completed) 6. Postsecondary or higher
SLA_12	Years of employment as a CHW supervisor	
SLA_13	Years of working with health data or the CHIS	

Module 1. CHIS Performance Diagnostic Tool

PD_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

Part A. Data Quality Assessment

DATA QUALITY ASSESSMENT BY THE CHW SUPERVISOR		
PD_001	Does the CHW supervisor have written instructions/guidelines on how to perform a review of data quality?	1. Yes, observed 2. Reported, not observed 3. No
PD_002	Did the CHW supervisor check the data quality in the past three months?	1. Yes 2. No → **Go to PD_005**
PD_003	If yes, did the CHW supervisor use a checklist to assess the data quality?	1. Yes, observed 2. Reported, not observed 3. No
PD_004	Did the CHW supervisor send a report/written feedback to the CHW on the findings of the last data quality assessment?	1. Yes, observed 2. Reported, not observed 3. No

Part B. Use of Information

INFORMATION USE GUIDELINES AND STRATEGIC DOCUMENTS		
PD_005	Does the CHW supervisor have written national/regional guidelines on CHIS information use available at the unit?	1. Yes, observed 2. Reported, not observed 3. No
DATA ANALYSIS AND VISUALIZATION		
PD_006	Does the CHW supervisor have access to data visuals (e.g., graphs, tables, maps) showing achievements toward targets (e.g., indicators, geographic and/or temporal trends, and situation data)?	1. Yes, paper copies of data visuals observed at the health unit 2. Yes, electronic copies of data visuals observed 3. Reported, not observed (paper or electronic copies) 4. No → **Go to PD_008**

PD_007	If *yes*, what type of information is captured in the data visuals?		
	01	Coverage of maternal health services (ANC, delivery, etc.)	1. Yes, observed 2. No
	02	Neonate and child healthcare (including vaccinations)	1. Yes, observed 2. No
	03	Burden of disease data (e.g., top 10 diseases)	1. Yes, observed 2. No
	04	Medicine stockouts	1. Yes, observed 2. No
	05	Sex-disaggregated data	1. Yes, observed 2. No
	06	Other (specify) _____	1. Yes, observed 2. No
PD_008	If an electronic system is being used, can the CHW supervisor generate data visuals?		1. Yes, observed 2. No 3. N/A (no electronic system is used)

ROUTINE DECISION-MAKING FORUMS AND PROCESSES AT THE SUPERVISORY LEVEL		
PD_009	Did the CHW supervisor organize or facilitate any performance review or management team meetings with the CHWs in attendance in the past three months?	1. Yes 2. No → **Go to PD_017**
PD_010	If *yes*, does the CHW supervisor have copies of the minutes from any performance review or management meetings in the past three months?	1. Yes, observed 2. Reported, not observed → **Go to PD_016** 3. No → **Go to PD_017**
For questions PD_011 to PD_016, check the performance review meeting minutes for the selected months and determine whether the following topics were discussed:		
PD_011	Did they discuss CHIS management, such as data quality, completeness, or timeliness of reporting?	1. Yes 2. No → **Go to PD_014**
PD_012	If *yes*, were any follow-up actions agreed upon based on CHIS-related issues?	1. Yes 2. No → **Go to PD_014**

PD_013	If *yes*, has any follow-up action happened regarding the decisions made on CHIS-related issues discussed during previous meetings (e.g., referring CHIS-related issues/problems to the higher level to find solutions)?		1. Yes 2. No 3. Do not know	
PD_014	Were discussions held to review key performance targets (i.e., tracking progress against targets) based on CHIS data for any of the following?			
	01	Coverage of services provided by CHWs like ANC, delivery, expanded program of immunization (EPI), and TB	1. Yes 2. No	→**PD_016** (if all are *no*)
	02	Burden of disease data (e.g., top 10 diseases)	1. Yes 2. No	
	03	Identification of emerging issues/epidemics	1. Yes 2. No	
	04	Medicine stockouts	1. Yes 2. No	
	05	Sex-disaggregated data	1. Yes 2. No	
PD_015	Did the CHW supervisor or higher levels (e.g., the health facility or district office) make any decisions on the following based on discussions of CHW performance?			
	01	Formulation of plans of action	1. Yes 2. No	
	02	Budget preparation	1. Yes 2. No	
	03	Budget reallocation	1. Yes 2. No	
	04	Medicine supply and drug management	1. Yes 2. No	
	05	HR management (training, reallocation, etc.)	1. Yes 2. No	
	06	Advocacy for policy, programmatic, or strategic decisions at higher levels	1. Yes 2. No	
	07	Promotion of service quality/improvement	1. Yes 2. No	
	08	Reducing the gender gap in the provision of health services	1. Yes 2. No	
	09	No action required at this time	1. Yes 2. No	

PD_016	Were the performance review/management meeting minutes circulated to all team members?	1. Yes, observed 2. Reported, not observed 2. No

ANNUAL PLANNING			
PD_017	Does the CHW supervisor have an annual plan for the current year?		1. Yes 2. No → **Go to PD_020**
PD_018	If *yes*, does that annual plan use data from the CHIS for problem identification and/or target setting?		1. Yes 2. No
PD_019	Does the annual plan contain activities and/or targets related to improving or addressing any of the following:		
	01	Coverage of services such as ANC, delivery, EPI, or TB	1. Yes 2. No
	02	Burden of disease data (e.g., top 10 diseases)	1. Yes 2. No
	03	Emerging issues/epidemics	1. Yes 2. No
	04	Medicine stockouts	1. Yes 2. No
	05	Family planning	1. Yes 2. No
	06	Gender disparity in health services coverage	1. Yes 2. No
	07	Other (specify) _____	1. Yes 2. No

DATA DISSEMINATION OUTSIDE THE HEALTH SECTOR		
PD_020	Does the CHW supervisor have to submit/present performance reports to a council of public representatives/civil administration?	1. Yes 2. No → **End survey or go to PD_022**
PD_021	If *yes*, did the CHW supervisor submit/present health sector performance reports based on CHIS data to a council of public representatives/civil administration in the past 12 months?	1. Yes 2. No

PD_102	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Supplemental Section: Feedback

FEEDBACK TO THE CHW		
PD_022	Did the CHW supervisor conduct any supervision visits in the past three months?	1. Yes 2. No 3. N/A (respondent has never had a supervision visit) → **End survey**
PD_023	During the last supervision visit, did the supervisor discuss the CHW's healthcare delivery performance based on CHIS information?	1. Yes 2. No
PD_024	Did the CHW supervisor provide written feedback to the CHW in the past three months on service performance (e.g., appreciation/acknowledgement of good performance; resource allocation/mobilization)?	1. Yes, observed 2. Reported, not observed 3. No

Module 2. Management Assessment Tool (MAT)

Ask the person in-charge of the CHW supervisory unit to provide you with the relevant documents in order to conduct a desk review or observe them and respond to the questions.

MAT_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

GOVERNANCE		
MAT_001	Does the office have a written document describing the CHIS mission and purpose, and the roles and responsibilities of CHWs and their supervisors to manage the CHIS?	1. Yes 2. No
MAT_002	Does the office have a current organizational and/or staff chart showing the positions of CHWs and their supervisors in the organization?	1. Yes 2. No
MAT_003	Does the office have written SOPs and procedural guidelines for the CHIS that include the following?	
	01. Data definitions	1. Yes 2. No
	02. Tools and procedures for data collection and reporting, including reporting frequency	1. Yes 2. No
	03. Data aggregation, processing, and transmission procedures	1. Yes 2. No
	04. Data analysis, dissemination, and use guidelines	1. Yes 2. No
	05. Data quality assurance procedures	1. Yes 2. No
	06. Data privacy, confidentiality, and security guidelines	1. Yes 2. No
	07. Performance monitoring process	1. Yes 2. No
	08. How to prepare and update the catchment area or household map (e.g., an SOP that defines the reporting structure, including what to report, when to report, where to report, and how to report)	1. Yes 2. No

MAT_004	Does the MOH/region/NGO/CBO/district have an overall framework and plan for ICT at the community level (outlining the required equipment and a plan for training in the use of ICT for the CHIS)?	1. Yes 2. No 3. N/A or don't know
MAT_005	Does the office or organization maintain a list/documentation of the dissemination of CHIS monthly/quarterly reports to the health program staff in the district, the community, local administration, NGOs, etc.?	1. Yes 2. No 3. N/A or don't know

PLANNING		
MAT_006	Has the office set CHIS performance targets (e.g., for data accuracy, completeness, and timeliness) for their respective CHWs?	1. Yes 2. No

CAPACITY DEVELOPMENT/TRAINING		
MAT_007	Does the office have a CHIS training manual: either a separate training manual for the CHIS/CHWs only or as part of the broader RHIS?	1. Yes 2. No → **Go to MAT_009**
MAT_008	If yes, has the office conducted a CHIS training in the past three years using the CHIS training manual?	1. Yes 2. No
MAT_009	Does the office have a training and capacity development plan that includes a budget?	1. Yes 2. No
MAT_010	Does the office have a schedule for planned trainings on the CHIS?	1. Yes, for one year 2. Yes, for two years or more 3. No

MAT_011	Indicate whether the listed staff members from this office have received any training in the following skills during the past three years, the number of training courses/sessions attended, and the year of the latest training.

01. Title or Post	**02. Number of training courses/sessions attended by this person in the past three years**	**03. Year of last training** (In the past three years)	**04. Subjects of last training** (List all that apply) **1.** Data collection **2.** Data analysis **3.** Data display **4.** Data reporting **5.** Data quality **6.** Data use **7.** Data entry **8.** Aggregate reporting
1. CHW supervisor			
2. CHIS officer (different cadre than CHW supervisor)			
3. Monitoring and evaluation (M&E) officer			
4. Office head			

SUPPORTIVE SUPERVISION		
MAT_012	Does the office have copies of CHIS supervision guidelines and checklists related to the CHIS?	1. Yes 2. No
MAT_013	Does the office maintain a schedule for CHIS supervision visits?	1. Yes 2. No
MAT_014	Does the office have copies of the reports of CHIS supervision visits conducted during the current fiscal year?	1. Yes 2. No → **Go to MAT_016**
MAT_015	If *yes*, does the office have a copy of the report of the latest CHIS supervision visit in which commonly agreed upon action points are listed?	1. Yes 2. No

FINANCING		
MAT_016	Does the office have a budget or financial plan for CHIS supplies (e.g., registers, forms, and guidelines)?	1. Yes 2. No
MAT_017	Does the office have allocated or available funds for these CHIS supplies?	1. Yes 2. No
MAT_018	Do the appropriate HIS/M&E officers or supervisors have access to financial and logistics resources for CHIS supervision?	1. Yes 2. No
MAT_019	Does the office have a copy of the long-term financial plan for supporting CHIS activities?	1. Yes 2. No

MAT_102	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Module 3. CHIS Resource Checklist

RC_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

EQUIPMENT AND SERVICES				
Please verify whether the following equipment is available in the unit:				
Type of equipment/service			**A. Total quantity**	**B. Quantity in working condition**
			(If none, enter 0)	
RC_001	Computer	1. Laptop		
		2. Desktop		
		3. Tablet		
RC_002	Is there a backup unit kept on site?		1. Yes 2. No → **Go to RC_004**	
RC_003	If *yes*, type of data backup unit	1. Server	1. Yes 2. No	
		2. Universal serial bus (USB) drives with backup data	1. Yes 2. No	
		3. Compact disc with backup data	1. Yes 2. No	
		4. External hard drive	1. Yes 2. No	
		5. Zip drive	1. Yes 2. No	
RC_004	Printer		1. Yes 2. No	
RC_005	Modem		1. Yes 2. No	
RC_006	Uninterruptible power supply (UPS)		1. Yes 2. No	
RC_007	Circuit breaker		1. Yes 2. No	
RC_008	Generator		1. Yes 2. No	
RC_009	Calculator		1. Yes 2. No	

RC_010	Telephone	1. Unit mobile phone (smartphone) with access to telephone network	1. Yes 2. No
		2. Unit mobile phone (regular) with access to telephone network	1. Yes 2. No
		3. Landline phone	1. Yes 2. No
		4. Radio phone	1. Yes 2. No
RC_011	What is the cellular network bandwidth?		1. 1G 2. 2G 3. 3G 4. 4G
RC_012	Fax		1. Yes 2. No
RC_013	Is there access to an Internet network?		1. Yes 2. No → **Go to RC_017**
RC_014	If *yes*, what kind?	Ethernet	1. Yes 2. No
		Wireless (Wi-Fi)	1. Yes 2. No
RC_015	What is the Internet coverage/speed?		1. 1G 2. 2G 3. 3G 4. 4G
RC_016	On average, how many days per month is there access to the Internet?		1. 20 or more 2. 10 to 19 3. Less than 10
UTILITIES			
RC_017	Is there a continuous electricity supply?		1. Yes → **Go to RC_019** 2. No
RC_018	If *no*, on average, how many days per month is the electricity supply interrupted?		1. 20 or more 2. 10 to 19 3. Less than 10

HUMAN RESOURCES FOR CHIS		
RC_019	What is the total number of people who are supposed to work in the district CHIS office and/or who are responsible for CHIS/HIS management and oversight, if they exist?	
RC_020	What is the total number of people working in the district CHIS office and/or who are responsible for CHIS management and oversight, if they exit?	

RC_102	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Module 4. Organizational and Behavioral Assessment Tool (OBAT)

OB_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

SECTION 1. PROMOTION OF AN INFORMATION CULTURE

We would like to know your opinion (how strongly you agree or disagree) about certain aspects of the CHIS in your country. There is no right or wrong answer, only an expression of your opinion based on a scale. The scale assesses the intensity of your belief and ranges from strongly disagree (1) to strongly agree (5).

This information will remain confidential and will not be shared with anyone, except when presented as an aggregated data report. Please be frank and choose your answers honestly.

Strongly disagree = 1 Disagree = 2 Neither disagree nor agree = 3 Agree = 4 Strongly agree = 5

To what extent do you agree with the following statements, on a scale of 1 to 5?

OB_001	**In your organization, decisions are based on…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	Personal preference of decision makers	1	2	3	4	5
02	Superiors' directives	1	2	3	4	5
03	Evidence/facts/data	1	2	3	4	5
04	History (e.g., what was done last year)	1	2	3	4	5
05	Funding directives from higher levels	1	2	3	4	5
06	Political considerations	1	2	3	4	5
07	Overall health-sector strategic objectives of the country	1	2	3	4	5
08	Locally identified health needs of the population	1	2	3	4	5
09	The relative cost of interventions	1	2	3	4	5
10	Participatory decision making, by obtaining input from relevant staff	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_002	**In your organization, community health program managers or higher-level supervisors…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	Seek input from community health workers	1	2	3	4	5
02	Emphasize that data quality procedures be followed in the compilation and submission of periodic reports (e.g., monthly reports)	1	2	3	4	5
03	Promote getting feedback from the CHWs, CHW supervisors, and community members	1	2	3	4	5
04	Use community data for health-service performance monitoring and target setting	1	2	3	4	5
05	Emphasize the need to use CHIS data to identify potential gender-related disparities in service delivery or use	1	2	3	4	5
06	Conduct routine data quality checks at points where data are captured, processed, or aggregated	1	2	3	4	5
07	Ensure that regular meetings are held with CHWs, during which data and information are discussed and used in decision making	1	2	3	4	5
08	Provide regular feedback on reported data quality (e.g., accuracy of data compilation/reporting) to the CHWs responsible for collecting and reporting the data	1	2	3	4	5
09	Recognize or reward staff/CHWs for good work performance	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_003	**At the community level, CHWs…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	Complete CHIS tasks (reporting, processing/aggregation, and/or analysis) in a timely manner (i.e., meet appropriate deadlines)	1	2	3	4	5
02	Display commitment to the CHIS mission (i.e., to generate and use good-quality—accurate, complete, and timely—data for evidence-based decision making)	1	2	3	4	5
03	Pursue individual performance targets and set feasible service delivery targets for essential service performance	1	2	3	4	5
04	Feel "personal responsibility" for failing to reach performance targets	1	2	3	4	5
05	Use CHIS data to inform and manage day-to-day tasks	1	2	3	4	5
06	Use CHIS data to solve common problems in service delivery	1	2	3	4	5
07	Use sex-disaggregated or gender-sensitive CHIS data to identify and/or solve gender-related problems in service delivery	1	2	3	4	5
08	Prepare data visuals (graphs, tables, maps, etc.) showing achievements toward targets (indicators, geographic and/or temporal trends, or situation data)	1	2	3	4	5
09	Can evaluate whether an intervention achieved the targets or goal	1	2	3	4	5
10	Are able to make decisions appropriate to their job description in response to the findings of data analysis (e.g., changes in service delivery, plans for household visits or outreach activities, work flows, or case management practices)	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_003	**At the community level, CHWs…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
11	Are held accountable for poor performance (e.g., failure to meet reporting deadlines or other data quality standards)	1	2	3	4	5
12	Admit mistakes if/when they occur and take corrective action	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_004	**My personal feelings are that…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	I feel discouraged when the data that I (or the CHW that I supervise) collect/record are not used for taking action	1	2	3	4	5
02	I (or the CHWs that I supervise) find that collecting/recording data is tedious (i.e., repetitive or duplicative)	1	2	3	4	5
03	I find that the data that I collect burdens my workload, making it difficult for me to complete my other duties	1	2	3	4	5
04	Collecting data from the community is meaningful/useful for me	1	2	3	4	5
05	I feel that the data that I (or the CHWs that I supervise) collect are important for monitoring the performance of the health services provided to the community	1	2	3	4	5
06	My work collecting data is appreciated and valued by my supervisors	1	2	3	4	5
07	I feel that data collection/recording is not the responsibility of healthcare providers	1	2	3	4	5

SECTION 2. SELF-PERCEPTION OF COMPETENCY TO PERFORM CHIS TASKS												
OB_005	**This part of the questionnaire is about how you perceive your competence in performing tasks related to the CHIS. Please be frank and rate your competence honestly.** Please rate your competence for each situation on a scale of 0 to 10, 0 being "not at all confident" and 10 being "extremely confident."											
01	I can check data accuracy.	0	1	2	3	4	5	6	7	8	9	10
02	I can calculate percentages/rates correctly.	0	1	2	3	4	5	6	7	8	9	10
03	I can plot a trend on a chart.	0	1	2	3	4	5	6	7	8	9	10
04	I can explain the implication of the results of data analysis.	0	1	2	3	4	5	6	7	8	9	10
05	I can use data to identify service performance gaps and set performance targets.	0	1	2	3	4	5	6	7	8	9	10
06	I can use data to make case management decisions or to make changes in service delivery, plans for household visits or outreach activities, work flows, or case management practices.	0	1	2	3	4	5	6	7	8	9	10

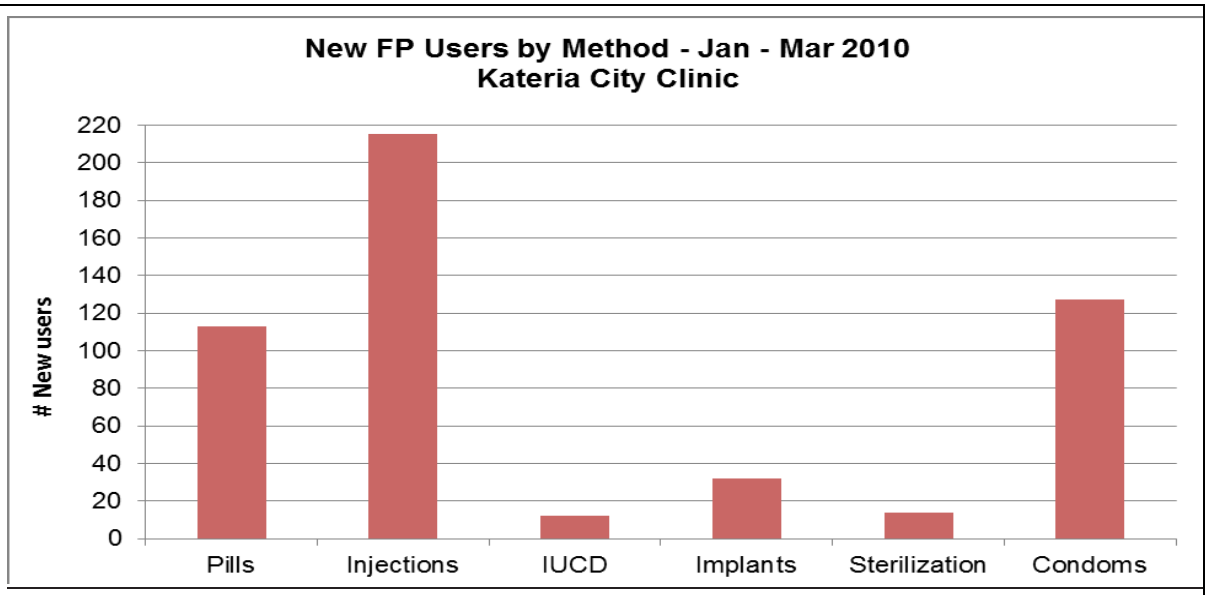
SECTION 3. COMPETENCY TO PERFORM CHIS TASKS	
We would like you to solve the following problems related to compiling data, calculating percentages, plotting data, and interpreting information.	
OB_006	The estimated number of pregnant mothers in the facility catchment area for the current period is 340. The antenatal clinic in your facility has registered 170 pregnant mothers. Calculate the percentage of pregnant mothers in the facility catchment area attending antenatal care (ANC).

OB_007

The table below shows the number of pregnant women attending ANC for the first time and the number of these women who received a first dose of intermittent protective therapy (IPT1) for malaria.

Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
# of ANC visits	156	162	158	151	168	148	129	138	145	171	164	152
# of women who received IPT1 in ANC	101	110	107	106	121	105	97	109	117	144	143	138

Prepare a line graph depicting the trend over one year in IPT1 coverage among women attending ANC for the first time.

OB_008	 What does the graph above tell you about the family planning (FP) method mix for new users at the Kateria City Clinic?	
OB_009	The target for Kateria City Clinic for new FP clients for the year 2010 is 1,200 clients. How many new clients would the facility need to have each month if new clients were evenly distributed by month?	
OB_010	Let's assume that Kateria City Clinic maintains, for the next three quarters (9 months), the January to March 2010 trend for the number of new FP clients enrolled. Will Kateria City Clinic meet the target by the end of the year?	1. Yes 2. No
OB_011	Provide at least one use of the above graph findings at the:	
	01 CHW supervisory level	

	02	Community level
OB_012	A survey in the facility catchment area found 500 children (225 boys and 275 girls) under five years of age who were malnourished. The total population of children younger than five years was 5,000, and 55% were female.	
	01	What is the malnutrition rate of boys?
	02	What is the malnutrition rate of girls?
OB_013	What information do you get by disaggregating the data by sex?	
OB_014	How does this information help you plan/improve your service delivery?	

OB_102	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

APPENDIX 3. COMMUNITY HEALTH WORKER-LEVEL ASSESSMENT

Premodule: Background Information and Verbal Consent

SURVEY FACILITATOR		
CHW_01	Survey date	
CHW_02	Facilitator name	
CHW_03	Facilitator code Please enter your 2-character identifier	☐☐
RESPONDENT AND UNIT IDENTIFICATION		
CHW_04	Type of unit	1. Health facility 2. Community level-unit/health post/outreach center 96. Other (specify) _____
CHW_05	Managing authority	1. Government/public 2. NGO/not-for-profit 3. Private-for-profit 4. Mission/faith-based/CBO 96. Other (specify) _____
CHW_06	Unit name to which the respondent belongs	
CHW_07	Location of the unit	1. Urban 2. Rural
CHW_08	Job title of the respondent	1. CHW 96. Other (specify) _____

INFORMED CONSENT		
READ THE FOLLOWING TEXT TO THE RESPONDENT: Good day! My name is _____. We are here on behalf of [*IMPLEMENTING AGENCY*] conducting a survey to help the government know more about how the community health information system in [*COUNTRY*] is performing. Your unit was randomly selected to participate in this study. We will be asking you questions about the health services and the reporting of those services. This information may be used by [*MOH AND/OR IMPLEMENTING AGENCY*], organizations supporting services at the community level, and researchers, to plan service improvement or to conduct more studies of health services. Neither your name nor the names of any other respondent participating in this study will be included in the data set or in any report. However, there is a small chance that any of these respondents may be identified later. Nevertheless, we are asking your help to ensure that the information we collect is accurate. You may refuse to answer any question or choose to stop the interview at any time. However, we hope you will answer all of the questions, which will benefit the clients you serve and the nation. If there are questions that would be more accurately answered by someone better informed of any specifics we ask about, we would appreciate if you would introduce us to that person to help us collect any missing or incomplete information. At this point, do you have any questions about the study? Do I have your agreement to proceed? _____ _____ / _____ / _____ INTERVIEWER'S SIGNATURE INDICATING CONSENT OBTAINED DAY MONTH YEAR		
CHW_09	May I begin the interview?	1. Yes 2. No → **End survey**

RESPONDENT BACKGROUND		
CHW_10	Employment status of the CHW *(Adapt these categories to the country context)*	1. CHW – Full-time salaried 2. CHW – Volunteer 3. CHW – Part-time salaried 96. Other (specify) _____
CHW_11	Sex	1. Male 2. Female 3. Other/prefer not to respond
CHW_12	Highest level of formal education achieved (circle one)	1. None 2. Primary/elementary (not completed) 3. Primary/elementary (completed) 4. Secondary/high school (not completed) 5. Secondary/high school (completed) 6. Postsecondary or higher
CHW_13	Years of employment as a CHW	

Module 1. CHIS Performance Diagnostic Tool

This form is applied at the CHW/health post/community level-health unit where services are provided and service statistics are recorded. In cases where the CHW does not maintain any service records (i.e., records are instead maintained by the CHW's supervisor), the assessment should be conducted at that level.

PD_201	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

Part A. Data Quality Assessment

Please write the two review months that will be used during this assessment.		
Month_1	Month:	Year:
Month_2	Month:	Year:

MATERNAL HEALTH INDICATOR		
ANTENATAL CARE FIRST VISIT (ANC1)		
PD_025	Does the unit provide ANC services?	1. Yes 2. No ➔ **Go to PD_032**
PD_026	If yes, do you report ANC data to the higher level?	1. Yes 2. No ➔ **Go to PD_032**
PD_027	If yes, what is the source document (i.e., the instrument in which you record ANC data to compile the monthly reports on ANC services)? We are primarily interested in the main document used to **compile** the total number of ANC1 visits at this unit. Please report if any improvised documents are used.	1. ANC register or integrated ANC register 2. Tally sheets 3. Patient cards 4. Electronic patient/client/household records 96. Other (specify) _____

Review the source document used to compile and summarize information for monthly reporting (i.e., register, tally sheet) for ANC1 visits and answer the following questions:						
PD_028	Please confirm (by the interviewer) the availability of the **source document** for ANC visits for Months 1 and 2. If available, please **recount** the number of ANC1 visits recorded in the **main source document** for Months 1 and 2.	**(A)** Source document available				**(B)** Recount the number of ANC1 visits in the source document (if none, enter 0).
		Yes, available and complete*	Yes, available but partly** complete	Yes, available but no data recorded	No	
01	Month 1: _____/_____ MM YYYY	1	2	3	4	
02	Month 2: _____/_____ MM YYYY	1	2	3	4	

Take all or the last 50 entries (whichever is smaller) recorded in the source document for each reporting period and check whether all the data elements relevant to the selected indicator are filled.
***COMPLETE:** The source document contains the data relevant to the selected indicator.
****PARTLY:** The source document is available but some information is missing.

Review the monthly report on ANC1 and answer the following questions:					
PD_029	Please confirm (by the interviewer) the availability of the **monthly report** on ANC visits for Months 1 and 2. If available, please **record** the number of ANC1 visits recorded in the **monthly report** for Months 1 and 2.	**(A)** Monthly report available			**(B)** Record the number of ANC1 visits from the monthly report (if missing, leave blank; if no patients for that month, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	Not available	
01	Month 1: _____/_____ MM YYYY	1	2	3	
02	Month 2: _____/_____ MM YYYY	1	2	3	
DATA COMPLETENESS					
PD_030	If the source document and/or monthly reports are not completely filled or not available at all, what is/are the reason(s) for the missing data? (Select all that apply)	1. Shortage/unavailability of printed forms or malfunctioning electronic tools 2. CHW busy providing services (workload) 3. CHW does not understand the data element(s) required 4. Presence of other vertical reporting requirements (data burden) 96. Other (specify) _____			
DISCREPANCIES					
PD_031	If a discrepancy was observed between the **main source document** (PD_028) and the **monthly report** (PD_029), what is/are the reason(s) for the discrepancy?	1. Data entry errors 2. Arithmetic errors 3. Information from all source documents not compiled correctly 96. Other (specify) _____			

FAMILY PLANNING INDICATOR						
WOMEN PROVIDED CONTRACEPTIVES BY THE CHW						
PD_032	Does the unit provide FP services?	1. Yes 2. No ➔ **Go to PD_039**				
PD_033	If yes, do you report the number of women receiving any form of contraceptive method from the CHW at this unit to the higher level?	1. Yes 2. No ➔ **Go to PD_039**				
PD_034	What is the source document (i.e., the instrument in which you record FP data to compile the monthly reports on FP services)? We are primarily interested in the main document used to **compile** the total number of women receiving any form of contraceptive method from the CHW at this unit. Please report if any improvised documents are used.	1. FP register 2. Tally sheets 3. Patient cards 4. Electronic patient/client/household records 96. Other (specify) _____				
Review the source document used to compile and summarize information for monthly reporting (i.e., register; tally sheet) for the number of women receiving any form of contraceptive method from the CHW at this unit and answer the following questions:						
PD_035	Please confirm (by the interviewer) the availability of the **source document** for FP data for Months 1 and 2. If available, please **recount** the number of women receiving any form of contraception from the CHW at this unit recorded in the **main source document** for Months 1 and 2.	**(A)** Source document available				**(B)** Recount the number of women receiving any form of contraception from the CHW at this unit in the source document (if none, enter 0).
		Yes, available and complete*	Yes, available but partly** complete	Yes, available but no data recorded	No	
01	Month 1: _____/_____ MM YYYY	1	2	3	4	
02	Month 2: _____/_____ MM YYYY	1	2	3	4	

Take all or the last 50 entries (whichever is smaller) recorded in the source document for each reporting period and check whether all the data elements relevant to the selected indicator are filled. ***COMPLETE:** The source document contains the data relevant to the selected indicator. ****PARTLY:** The source document is available but some information is missing.					
Review the monthly report on FP and answer the following questions:					
PD_036	Please confirm (by the interviewer) the availability of the **monthly report** on FP data for Months 1 and 2. If available, please **record** the number of women receiving any form of contraception from the CHW at this unit recorded in the **monthly report** for Months 1 and 2.	**(A)** Monthly report available			**(B)** Record the number of women receiving any form of contraception from the CHW at this unit from the monthly report (if missing, leave blank; if no patients for that month, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	Not available	
01	Month 1: _____/_____ MM YYYY	1	2	3	
02	Month 2: _____/_____ MM YYYY	1	2	3	
DATA COMPLETENESS					
PD_037	If the source document and/or monthly reports are not completely filled or not available at all, what is/are the reason(s) for the missing data? (Select all that apply)	1. Shortage/unavailability of printed forms or malfunctioning electronic tools 2. CHW busy providing services (workload) 3. CHW does not understand the data element(s) required 4. Presence of other vertical reporting requirements (data burden) 96. Other (specify) _____			
DISCREPANCIES					
PD_038	If a discrepancy was observed between the **main source document** (PD_035) and the **monthly report** (PD_036), what is/are the reason(s) for the discrepancy?	1. Data entry errors 2. Arithmetic errors 3. Information from all source documents not compiled correctly 96. Other (specify) _____			

Similar questions are available in the supplement section of this module (see page 82 for indicators related to immunization, HIV, TB, and malaria.

REPORT TIMELINESS			
PD_039	Is there a deadline for submission of the monthly CHIS report by the CHW (or the CHW supervisor) to the higher level? If *yes*, what is the deadline?		1. Yes (specify) _____ 2. No
PD_040	Does the CHW record the date of submission of monthly CHIS reports to the district or the next higher level (see register/computer)?		1. Yes, observed 2. Reported, not observed ➔ **Go to PD_042** 3. No ➔ **Go to PD_042**
PD_041	**If available, review the records and check the dates of submission for the one or two review months.** Are the CHIS monthly reports submitted on time (before or on the deadline)?		
	01	Month 1: _____	1. Yes 2. No
	02	Month 2: _____	1. Yes 2. No

SUPERVISION VISITS		
PD_042	How many times did the CHW supervisor visit the CHW in the past three months?	1. One time 2. Two times 3. Three times 4. Four times 5. More than four times 6. None → **Go to Part B**
PD_043	Did the CHW supervisor check the data quality?	1. Yes 2. No → **Go to Part B**
PD_044	If *yes*, did the CHW supervisor use a checklist to assess the data quality?	1. Yes 2. No
PD_045	Did the CHW supervisor send a report or written feedback on the last data quality supervision visit(s) (including data accuracy, reporting timeliness, and/or report completeness)?	1. Yes, observed 2. No

Part B: Use of Information

INFORMATION USE GUIDELINES AND STRATEGIC DOCUMENTS		
PD_046	Do written national/regional guidelines on CHIS information exist and are they available at the unit?	1. Yes, copies available at the unit 2. Yes, but copy is not available at the health unit 3. No
DATA USE AT SERVICE POINT		
PD_047	Can the CHW track clients/patients requiring follow-up services (i.e., CHW can show who to follow up with and when the next appointment of the client/patient has to occur)?	1. Yes (for multiple services) 2. Partially (for only one type of service, such as immunization) 3. No

DATA ANALYSIS AND VISUALIZATION			
PD_048	Does the CHW have access to analyzed data/data visuals (i.e., graphs, tables, maps) showing demographic data for calculating indicators, targets set for the indicators, achievements toward targets (indicators, geographic and/or temporal trends, and situation data)? Or, if using an electronic system, can demonstrate data visuals?		1. Yes, paper or electronic copies of data visuals observed at the health unit 2. No → **Go to PD_50**
PD_049	If *yes*, what type of information is captured in the data visuals?		
	01	Maternal healthcare	1. Yes, observed 2. No
	02	Neonate and child healthcare (other than EPI)	1. Yes, observed 2. No
	03	Top causes of morbidity and mortality	1. Yes, observed 2. No
	04	Sex-disaggregated indicators	1. Yes, observed 2. No
	05	Other (specify) _____	1. Yes, observed 2. No

FEEDBACK TO THE CHW		
PD_050	Did the CHW supervisor send a report or written feedback on service performance based on reported CHIS data (e.g., appreciation/ acknowledgement of good performance; resource allocation/mobilization)?	1. Yes, observed 2. No

ANNUAL PLANNING			
PD_051	Does the CHW have an annual plan for the current year?		1. Yes 2. No → **Go to PD_054**
PD_052	If yes, does that annual plan use data from the CHIS for problem identification and/or target setting?		1. Yes 2. No
PD_053	Does the annual plan contain activities and/or targets related to improving or addressing any of the following?		
	01	Coverage of services, such as ANC, delivery, EPI, or TB	1. Yes 2. No
	02	Burden of disease data (e.g., top 10 diseases)	1. Yes 2. No
	03	Emerging issues/epidemics	1. Yes 2. No
	04	Medicine stockouts	1. Yes 2. No
	05	Family planning	1. Yes 2. No
	06	Gender disparity in health services coverage?	1. Yes 2. No

SUPERVISION VISITS		
If you selected any of the answers 1 to 5 in PD_042 *(the CHW supervisor visited the CHW at least once in the past three months)*, **proceed.** **If you selected answer "6" in PD_042** *(the CHW supervisor did not visit the CHW in the past three months),* **go to PD_057.**		
PD_054	During the supervision visit, did the supervisor discuss your healthcare delivery performance based on the CHIS information?	1. Yes 2. No → **Go to PD_056**
PD_055	If yes, did the supervisor help you make a decision or take corrective action based on the discussion?	1. Yes 2. No

PD_056	Did the supervisor send a report/written feedback on the last healthcare delivery performance supervision visit(s)?	1. Yes 2. No

DATA DISSEMINATION OUTSIDE THE HEALTH SECTOR		
PD_057	Does the CHW have to submit/present performance reports to a council of public representatives/civil administration?	1. Yes 2. No → **End survey**
PD_058	If yes, did the CHW submit/present health sector performance reports to a council of public representatives/civil administration in the past 12 months?	1. Yes 2. No → **End survey**
PD_059	Do those reports/presentations use data from the CHIS to report on the health sector's progress?	1. Yes 2. No

PD_202	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Supplemental Section: Other Indicators

INDICATOR DEFINITIONS AND REPORTING GUIDELINES			
PD_060	Do you have standard written definitions of the following indicators? *(Recommended indicators; adapt in-country, as necessary)*		
	01	Number of ANC1 visits	1. Yes 2. No 3. N/A
	02	Number of DTP3	1. Yes 2. No 3. N/A
	03	Number of patients currently on ART	1. Yes 2. No 3. N/A
	04	Number of presumptive TB cases referred by the CHW (for screening and diagnosis)	1. Yes 2. No 3. N/A
	05	Number of RDT-confirmed malaria cases	1. Yes 2. No 3. N/A
	06	Other (specify_____)	1. Yes 2. No 3. N/A

PD_061	Are written guidelines or instructions available to you on the reporting protocol for the CHIS, including…		
	01	…the reporting formats to be used for reporting to the next higher level?	1. Yes, observed 2. Reported, not observed 3. No
	02	...to whom the reports should be submitted?	1. Yes, observed 2. Reported, not observed 3. No
	03	...when the reports are due?	1. Yes, observed 2. Reported, not observed 3. No

IMMUNIZATION INDICATOR						
PENTAVALENT/DTP THIRD DOSE (DTP3) IN CHILDREN UNDER 1 YEAR						
PD_062	Does this unit provide immunization services?	1. Yes 2. No ➔ **Go to PD_069**				
PD_063	If yes, does this unit report immunization data to a reporting system?	1. Yes 2. No ➔ **Go to PD_069**				
PD_064	What source document is used by this unit for monthly reporting on DTP3? We are primarily interested in the main document used to **compile** monthly summary statistics for DTP3. Please report if any improvised documents are used.	1. Child register or child immunization register 2. Immunization tally sheets 3. Child health/immunization cards 96. Other (specify) _____				
Review the source document used to compile and summarize information for monthly reporting on DTP3 and answer the following questions:						
PD_065	Please confirm the availability of the **source document** for DTP3 for Months 1 and 2. If available, please **recount** the number of DTP3 immunizations recorded in the **main source document** for Months 1 and 2.	**(A)** Source documents available				**(B)** Recount the number of DTP3 immunizations in the source documents (if none, enter 0).
		Yes, available and complete*	Yes, available but partly** complete	Yes, available but no data recorded	No	
01	Month 1: ____/_____ MM YYYY	1	2	3	4	
02	Month 2: ____/_____ MM YYYY	1	2	3	4	
Take all or the last 50 entries (whichever is smaller) recorded in the source document for each reporting period and check whether all the data elements relevant to the selected indicator are filled. ***COMPLETE:** The source document contains the data relevant to the selected indicator. ****PARTLY:** The source document is available but some information is missing.						

Review monthly reports for DTP3 and answer the following questions:					
PD_066	Please confirm the availability of **monthly reports** for Months 1 and 2. If available, please **report** the number of DTP3 immunizations recorded in the **EPI monthly report** for Months 1 and 2.	**(A)** Monthly reports available			**(B)** Record the number of DTP3 immunizations from the monthly report (if missing, leave blank; if no patients for that month, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	Not available	
01	Month 1: _____/_____ MM YYYY	1	2	3	
02	Month 2: _____/_____ MM YYYY	1	2	3	
DATA COMPLETENESS					
PD_067	If the source document and/or monthly reports are not completely filled, what is/are the reason(s) for the missing data? (Select all that apply)	1. Shortage/unavailability of printed forms or malfunctioning electronic tools 2. CHW busy providing services (workload) 3. CHW does not understand the data element(s) required 4. Presence of other vertical reporting requirements (data burden) 96. Other (specify) _____			
DISCREPANCIES					
PD_068	If a discrepancy was observed between the **main source document** (PD_065) and the **monthly report** (PD_066), what is/are the reason(s) for the discrepancy?	1. Data entry errors 2. Arithmetic errors 3. Information from all source documents not compiled correctly 96. Other (specify) _____			

HIV INDICATOR		
PATIENTS ON ART		
PD_069	Does this unit provide ART, or other HIV-related services (e.g., voluntary counseling and testing)?	1. Yes 2. No ➔ **Go PD_076**
PD_070	If yes, does this unit report the number of patients on ART to a reporting system?	1. Yes 2. No ➔ **Go PD_076**
PD_071	What source document does this unit use for monthly reporting on the number of patients on ART? We are primarily interested in the main document used to **compile** the total number of patients on ART seen at this unit. Please report if any improvised documents are used.	1. Pre-ART register 2. ART tally sheet 3. Patient cards 4. ART register 96. Other (specify) _____

Review the source document used to compile and summarize information for monthly reporting on ART and answer the following questions:

PD_072	Please confirm the availability of the **source document** for use at the unit to compile the number of **patients on ART** for Months 1 and 2. If available, please **recount** the number of **patients on ART** recorded in the **main source document** for Months 1 and 2.	**(A)** Source document available				**(B)** Recount the number of patients on ART in the source document (if none, enter 0).
		Yes, available and complete*	Yes, available but partly** complete	Yes, available but no data recorded	No	
01	Month 1: _____/_____ MM YYYY	1	2	3	4	
02	Month 2: _____/_____ MM YYYY	1	2	3	4	

Take all or the last 50 entries (whichever is smaller) recorded in the source document for each reporting period and check whether all the data elements relevant to the selected indicator are filled.
*** COMPLETE:** The source document contains the data relevant to the selected indicator.
****PARTLY:** The source document is available but some information is missing.

Review the monthly report on ART and answer the following questions:					
PD_073	Please confirm the availability of the **monthly report** on the number of **patients on ART** for Months 1 and 2. If available, please **record** the number of **patients on ART** as recorded in the **monthly report** for Months 1 and 2.	**(A)** Monthly report available			**(B)** Record the number of patients on ART from the monthly report (if missing, leave blank; if no patients for that month, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	Not available	
01	Month 1: ____/_____ MM YYYY	1	2	3	
02	Month 2: ____/_____ MM YYYY	1	2	3	
DATA COMPLETENESS					
PD_074	If the source document and/or monthly reports are not completely filled, what is/are the possible reason(s) for the missing data? (Select all that apply)	1. Shortage/unavailability of printed forms or malfunctioning electronic tools 2. CHW busy providing services (workload) 3. CHW does not understand the data element(s) required 4. Presence of other vertical reporting requirements (data burden) 96. Other (specify) _____			
DISCREPANCIES					
PD_075	If a discrepancy was observed between the **main source document** (PD_072) and the **monthly report** (PD_073), what is/are the reason(s) for the discrepancy?	1. Data entry errors 2. Arithmetic errors 3. Information from all source documents not compiled correctly 96. Other (specify) _____			

TB INDICATOR		
REFERRED TB CASES		
PD_076	Do you refer patients for TB screening and diagnosis?	1. Yes 2. No ➔ **Go to PD_083**
PD_077	If *yes*, do you report the **total number of presumptive (or suspected) TB cases referred by you (CHW) for screening and diagnosis?** *(This indicator will require customization, based on the practices at the community level in the country.)*	1. Yes 2. No ➔ **Go to PD_083**
PD_078	Do you maintain any record on the number of presumptive TB cases referred by the CHW (for screening and diagnosis)? We are primarily interested in the main document used to **compile** monthly or quarterly summary statistics on the **total number of presumptive (or suspected) TB cases that you refer to a health facility for screening and diagnosis**. Please report if any improvised documents are used. <u>Note</u>: *If multiple documents are used, please indicate the summary document used (compiling all the information) as the source document for reporting.*	1. TB register 2. Presumptive TB register 3. Patient cards 4. TB laboratory register 5. Outpatient register 6. Electronic patient record system 96. Other (specify) _____

Review the source document used to compile and summarize information for monthly or quarterly reporting on presumptive TB cases and answer the following questions:						
PD_079	Please confirm the availability of the **source document** used by the CHW at the unit to compile the number of presumptive TB cases referred by the CHW (for screening and diagnosis) by month(s) or quarter. If available, please **recount** and record the number of **cases of presumptive (or suspected) TB referred by the CHW/unit** as recorded in the **main source document** for the month(s) or quarter.	**(A)** Source document available				(B) Recount the number of cases of presumptive (or suspected) TB referred by the CHW/unit in the source document (if none, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	No	N/A	
01	Month 1: ____/_____ MM YYYY	1	2	3	4	
02	Month 2: ____/_____ MM YYYY	1	2	3	4	
03	*If quarterly:* Quarter: ____/_____ *Insert quarter number (Q1-Q4) and year (YYYY)*	1	2	3	4	
Take all or the last 50 entries (whichever is smaller) recorded in the source document for each reporting period and check whether all the data elements relevant to the selected indicator are filled. *** COMPLETE:** The source document contains the data relevant to the selected indicator. ****PARTLY:** The source document is available but some information is missing.						

Review the monthly or quarterly report(s) for TB cases and answer the following questions:						
PD_080	Please confirm the availability of the **monthly or quarterly report** on the number of **presumptive TB cases referred by the CHW** by month(s) or quarter. If available, please **record** the number of **presumptive TB cases referred by the CHW** as recorded in the **monthly or quarterly report**.	**(A)** Report available				**(B)** Record the number of presumptive TB cases referred by the CHW in the monthly/quarterly report (if missing in the monthly/ quarterly report, leave blank; if no patients for that month, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	Not available	N/A	
01	Month 1: _____/_____ MM YYYY	1	2	3	4	
02	Month 2: _____/_____ MM YYYY	1	2	3	4	
03	*If quarterly,* Quarter: _____/_____ *Insert quarter (Q1-Q4) and year (YYYY)*	1	2	3	4	

DATA COMPLETENESS		
PD_081	If the monthly and/or quarterly reports are not completely filled, what are the possible reasons for the missing data? (Select all that apply)	1. Shortage/unavailability of printed forms or malfunctioning electronic tools 2. CHW busy providing services (workload) 3. CHW does not understand the data element(s) required 4. Presence of other vertical reporting requirements (data burden) 96. Other (specify) _____
DISCREPANCIES		
PD_082	What are the reasons for the discrepancy (if any) between recorded data (PD_079) and reported data (PD_080)?	1. Data entry errors 2. Arithmetic errors 3. Information from all source documents not compiled correctly 96. Other (specify) _____

MALARIA INDICATOR						
RDT-CONFIRMED MALARIA CASES						
PD_083	Does the unit use RDTs for malaria diagnosis?	1. Yes 2. No ➔ **End survey**				
PD_084	If yes, do you report malaria cases to a reporting system?	1. Yes 2. No ➔ **End survey**				
PD_085	What indicator do you use when reporting malaria cases?	1. Total malaria cases treated (presumed and confirmed) 2. Confirmed malaria cases (either by microscopy or RDT) 3. Suspected malaria cases tested 96. Other (specify) _____				
PD_086	What source document does this unit use for monthly reporting on malaria cases? We are primarily interested in the main document used to **compile** monthly summary statistics for malaria cases. Please report if any improvised documents are used.	1. Outpatient department register 2. Tally sheets 3. Patient cards 4. Lab register 96. Other (specify) _____				
Review the source document used to compile and summarize information for monthly reporting on the confirmed malaria cases and answer the following questions:						
PD_087	Please confirm the availability of the **source document** on malaria cases for Months 1 and 2. If available, please **recount** the number of malaria cases as recorded in the **main source document** for Months 1 and 2.	**(A)** Source document available				**(B)** Recount the number of malaria cases in the source document (if none, enter 0).
		Yes, available and complete*	Yes, available but partly** complete	Yes, available but no data recorded	No	
01	Month 1: _____/_____ MM YYYY	1	2	3	4	
02	Month 2: _____/_____ MM YYYY	1	2	3	4	

Take all or the last 50 entries (whichever is smaller) recorded in the source document for each reporting period and check whether all the data elements relevant to the selected indicator are filled.
*** COMPLETE:** The source document contains the data relevant to the selected indicator.
****PARTLY:** The source document is available but some information is missing.

Review the monthly report on confirmed malaria cases and answer the following questions:

PD_088	Please confirm the availability of the **monthly report** on malaria cases for Months 1 and 2. If available, please **record** the number of malaria cases recorded in the **monthly report** for Months 1 and 2.	**(A)** Monthly report available			**(B)** Record the number of malaria cases in the monthly report (if missing, leave blank; if no patients for that month, enter 0).
		Yes, available and complete*	Yes, available but no data recorded	Not available	
01	Month 1: _____/_____ MM YYYY	1	2	3	
02	Month 2: _____/_____ MM YYYY	1	2	3	

DATA COMPLETENESS		
PD_089	If the source document and/or monthly reports are not completely filled, what are the possible reasons for the missing data? (Select all that apply)	1. Shortage/unavailability of printed forms or malfunctioning electronic tools 2. CHW busy providing services (workload) 3. CHW does not understand the data element(s) required 4. Presence of other vertical reporting requirements (data burden) 96. Other (specify) _____
DISCREPANCIES		
PD_090	If a discrepancy was observed between the **main source document** (PD_087) and the **monthly report** (PD_088), what are the reasons for the discrepancy?	1. Data entry errors 2. Arithmetic errors 3. Information from all source documents not compiled correctly 96. Other (specify) _____

Module 2. Management Assessment Tool (MAT)

MAT_201	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

TRAINING			
MAT_020	Did you receive training on the CHIS in the past three years?		1. Yes 2. No
MAT_021	If yes, when?		
MAT_022	For how many days?		
MAT_023	On what topics?		
	01	Data collection	1. Yes 2. No
	02	Data compilation	1. Yes 2. No
	03	Data reporting	1. Yes 2. No
	04	Data quality assessment	1. Yes 2. No
	05	Data analysis	1. Yes 2. No
	06	Data use	1. Yes 2. No

MAT_202	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Module 3. CHIS Resource Checklist

RC_201	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

EQUIPMENT		
RC_021	Do you have a tablet?	1. Yes 2. No
RC_022	Do you have an Android phone (work phone)?	1. Yes 2. No
RC_023	Do you have an Android phone (personal phone)?	1. Yes 2. No
RC_024	Do you have access to the Internet?	1. Yes 2. No → **Go to RC_027**
RC_025	If yes, on average, how many days per month is there access to the Internet?	1. 20 or more 2. 10 to 19 3. Fewer than 10
RC_026	On average, how many hours per day is there access to the Internet on days with Internet access?	1. Less than 1 hour 2. 1 to 4 hours 3. More than 4 hours
RC_027	Do you have access to a charging station for electronic equipment?	1. At home 2. At work station 3. At health unit or other place away from the work station 4. None → **Go to RC_029**
RC_028	If yes, on average, how many days per month is there access to electricity for charging electronic equipment?	1. 20 or more 2. 10 to 19 3. Fewer than 10

AVAILABILITY OF CHIS SUPPLIES		
In the column for RC_029 below, list the different paper-based documents, registers, tally sheets, checklists, guidelines, job aids, training/reporting/feedback/other forms that you use on a regular basis. Answer questions RC_030 and RC_031 for each of these documents individually.		
RC_029. Type of records, tally sheets, reports, job aids, and training materials	**RC_030. Is the tool available?**	**RC_031. Have you run out of this form in the <u>past 6 months</u>?**
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No
	1. Yes 2. No	1. Yes 2. No

RC_202	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Module 4. Organizational and Behavioral Assessment Tool (OBAT)

OB_201	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

SECTION 1: PROMOTION OF AN INFORMATION CULTURE

We would like to know your opinion (how strongly you agree or disagree) about certain aspects of the CHIS in your country. There is no right or wrong answer, only an expression of your opinion based on a scale. The scale assesses the intensity of your belief and ranges from strongly disagree (1) to strongly agree (5).

This information will remain confidential and will not be shared with anyone, except when presented as an aggregated data report. Please be frank and choose your answers honestly.

Strongly disagree = 1 Disagree = 2 Neither disagree nor agree = 3 Agree = 4 Strongly agree = 5

To what extent do you agree with the following statements, on a scale of 1 to 5?

OB_015	**In your organization, decisions are based on…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	Personal preference of decision makers	1	2	3	4	5
02	Superiors' directives	1	2	3	4	5
03	Evidence/facts/data	1	2	3	4	5
04	History (e.g., what was done last year)	1	2	3	4	5
05	Funding directives from higher levels	1	2	3	4	5
06	Political considerations	1	2	3	4	5
07	Overall health-sector strategic objectives of the country	1	2	3	4	5
08	Locally identified health needs of the population	1	2	3	4	5
09	The relative cost of interventions	1	2	3	4	5
10	Participatory decision making, by obtaining input from relevant staff	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_016	**In your organization, community health program managers or higher-level supervisors…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	Seek input from CHWs	1	2	3	4	5
02	Emphasize that data quality procedures should be followed in the compilation and submission of periodic reports (e.g., monthly reports)	1	2	3	4	5
03	Promote getting feedback from the CHWs, CHW supervisors, and community members	1	2	3	4	5
04	Use community data for health service performance monitoring and target setting	1	2	3	4	5
05	Emphasize the need to use CHIS data to identify potential gender-related disparities in service delivery or use	1	2	3	4	5
06	Conduct routine data quality checks at points where data are captured, processed, or aggregated	1	2	3	4	5
07	Ensure that regular meetings are held with CHWs, at which data and information are discussed and used in decision making	1	2	3	4	5
08	Provide regular feedback on reported data quality (e.g., accuracy of data compilation/reporting) to the CHWs responsible for collecting and reporting the data	1	2	3	4	5
09	Recognize or reward staff/CHWs for good work performance	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_017	**In general, at the community level, CHWs…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	Complete CHIS tasks (reporting, processing/aggregation, and/or analysis) in a timely manner (i.e., meet appropriate deadlines)	1	2	3	4	5
02	Display commitment to the CHIS mission (i.e., to generate and use good-quality—accurate, complete, and timely—data for evidence-based decision making)	1	2	3	4	5
03	Pursue individual performance targets and set feasible service delivery targets for essential service performance	1	2	3	4	5
04	Feel "personal responsibility" for failing to reach performance targets	1	2	3	4	5
05	Use CHIS data for day-to-day management of the unit and district (e.g., service delivery, financial, commodities, and HR management)	1	2	3	4	5
06	Use CHIS data to solve common problems in service delivery	1	2	3	4	5
07	Use sex-disaggregated or gender-sensitive CHIS data to identify and/or solve gender-related problems in service delivery	1	2	3	4	5
08	Prepare data visuals (graphs, tables, maps, etc.) showing achievements toward targets (indicators, geographic and/or temporal trends, or situation data)	1	2	3	4	5
09	Can evaluate whether an intervention achieved the targets or goal	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_017	**In general, at the community level, CHWs…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
10	Are able to make decisions appropriate to their job description in response to the findings of data analysis (e.g., changes in service delivery, plans for household visits or outreach activities, work flows, or case management practices)	1	2	3	4	5
11	Are held accountable for poor performance (e.g., failure to meet reporting deadlines or other data quality standards)	1	2	3	4	5
12	Admit mistakes if/when they occur and take corrective action	1	2	3	4	5

To what extent do you agree with the following statements, on a scale of 1 to 5?						
OB_018	**My personal feelings are that…**	**Strongly disagree**	**Disagree**	**Neither disagree nor agree**	**Agree**	**Strongly agree**
01	I feel discouraged when the data that I collect/record are not used for taking action	1	2	3	4	5
02	I find that collecting/recording data is tedious (i.e., repetitive, duplicative)	1	2	3	4	5
03	I find the data that I collect burdens my work load, making it difficult for me to complete my other duties	1	2	3	4	5
04	Collecting data from the community is meaningful/useful for me	1	2	3	4	5
05	I feel that the data that I collect are important for monitoring the performance of the health services provided to the community	1	2	3	4	5
06	My work collecting data is appreciated and valued by my supervisors	1	2	3	4	5
07	I feel that data collection/recording is not the responsibility of healthcare providers	1	2	3	4	5

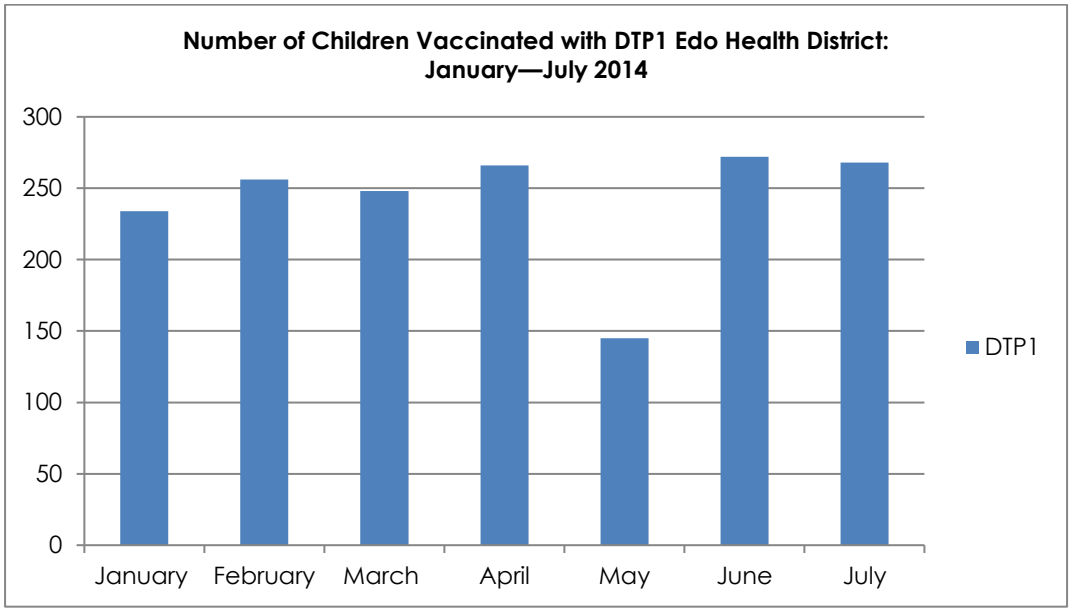
SECTION 2: SELF-PERCEPTION OF COMPETENCY TO PERFORM CHIS TASKS												
OB_019	**This part of the questionnaire is about how you perceive your competence in performing tasks related to the CHIS. Please be frank and rate your competence honestly.** Please rate your competence for each situation on a scale of 0 to 10, 0 being "not at all confident" and 10 being "extremely confident."											
01	I can check data accuracy.	0	1	2	3	4	5	6	7	8	9	10
02	I can calculate percentages/rates correctly.	0	1	2	3	4	5	6	7	8	9	10

03	I can plot a trend on a chart.	0	1	2	3	4	5	6	7	8	9	10
04	I can explain the implication of the results of data analysis.	0	1	2	3	4	5	6	7	8	9	10
05	I can use data to identify service performance gaps and set performance targets.	0	1	2	3	4	5	6	7	8	9	10
06	I can use data to make case management decisions or to make changes in service delivery, plans for household visits or outreach activities, work flows, or case management practices.	0	1	2	3	4	5	6	7	8	9	10

SECTION 3: COMPETENCY TO PERFORM CHIS TASKS

This survey is for the CHWs who prepare the monthly reports. We would like you to answer the following questions about calculating percentages, plotting data, and interpreting information.

OB_020	Who is administering this questionnaire?	1. Self-administered 2. Administered by the enumerator
OB_021	In your catchment area, 20 children under one year of age got the DTP3 (Penta 3) vaccine in March, 15 in April, 10 in May, 10 in June, and 20 in July. Prepare a trend graph (a line graph) depicting the month-by-month number of children under one year of age vaccinated for DTP3.	

OB_022	 Review the graph above. What aspects of the graph stand out? Is there a trend or an irregularity? If *yes* or *no*, explain the reasons for your answer. _____ _____ _____ _____
OB_023	Provide at least one use of the above chart findings at the community level:
OB_024	A survey in your catchment area found 100 children under five years of age who were malnourished. The total population of children younger than five years was 1,000. What is the malnutrition rate?

OB_025	If the malnutrition rate in children younger than two years was 20% and the total number of children younger than two years was 500, calculate the number of children who are malnourished.

OB_202	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

Supplemental Section: Competency for RHIS Tasks

SECTION 4: COMPETENCY TO IMPROVE DATA QUALITY		
Case Study on Data Quality The health extension workers (HEWs) at the Abela health post randomly selected 12 data elements from the Yekatit monthly report. The data elements varied across indicators (e.g., ranging from the number of women receiving contraceptives, to the number of ANC1 visits in a month, to the number of children vaccinated in the first six months after birth). The data elements from the monthly report (reported data) were cross-checked with the recorded data from the relevant tally sheets and registers for the same indicators, in the same period. The results showed that only seven data elements matched. For the five other data elements, the recorded data did not match the data in the report. The HEWs were upset about this result. They sat together to identify the reasons for the discrepancies and think about next steps to avoid such results in the future. After some discussion about the potential reasons for this problem, the HEWs started preparing an action plan for their health post.		
OB_026	What could be the possible cause of the mismatch?	
	1	
	2	
	3	
OB_027	What would you do to correct this situation?	
	1	
	2	
	3	
	4	

Module 5. Electronic CHIS Usability Assessment Tool

This section is used to assess whether the CHW is able to use the eCHIS. The CHW is asked to show the features as listed below. Observe and record the findings accordingly.

EUA_101	**INTERVIEW START TIME** (Use the 24-hour clock system)	:

EUA_001	Does the CHW use an electronic community health information system (eCHIS)? *Provide a definition*: The eCHIS is the community-based electronic health information system used by the CHW. It may have different names and functions depending on the local context.	1. Yes 2. No → **End survey**
EUA_002	If *yes*, is the eCHIS used for individual/household data and/or for aggregate data?	1. Individual or household data 2. Aggregate data → **Go to Section EUA-F** 3. Both individual/household and aggregate data

INDIVIDUAL OR HOUSEHOLD DATA: POINT OF CARE DATA ENTRY		
If the CHW is using an electronic system that allows data entry during individual encounters with the client/patient at the point of care/service, use the following tool to assess the basic usability of the electronic system used by the CHWs. **If the answer to EUA_002 is "1" or "3" (i.e., the eCHIS is used for individual or household data only or along with aggregate data), fill out sections EUA-A to EUA-E.** **If the answer to EUA_002 is "2" (aggregate data only), only fill out section EUA-F.**		
SECTION EUA-A: CLIENT IDENTIFICATION AND REGISTRATION		
EUA_003	Is the CHW able to register a new client using the eCHIS?	1. Yes, observed 2. No → **Go to Section EUA-B**
EUA_004	If *yes*, can the CHW retrieve a client's data in the eCHIS using the unique ID or other identification data?	1. Yes, observed 2. No

SECTION EUA-B: CLIENT HEALTH RECORDS		
EUA_005	Can the CHW longitudinally track a client's health status and services received?	1. Yes, observed 2. No 3. N/A: system does not have client health records
SECTION EUA-C: CHW DECISION SUPPORT/JOB AIDS		
EUA_006	Can the CHW show the checklist/job aids to enter data based on a national service delivery protocol (e.g., for pregnant women, child immunization, and FP services)?	1. Yes, observed 2. No 3. N/A: system does not have CHW decision support/job aids
EUA_007	Can the CHW show the list of maternal or child health clients who need follow-up visits?	1. Yes, observed 2. No
SECTION EUA-D: REFERRAL COORDINATION		
EUA_008	Can the CHW send information electronically to the referral facility?	1. Yes, observed 2. No 3. N/A: system does not have referral coordination
EUA_009	Can the CHW assess and review the data updated by the referral facility to confirm that service was provided to the client/patient referred by the CHW?	1. Yes, observed 2. No
SECTION EUA-E: CHW ACTIVITY PLANNING AND SCHEDULING		
EUA_010	Can the CHW show her/his activity plans and work schedules (e.g., monthly household/outreach visit schedule) using the eCHIS?	1. Yes, observed 2. No 3. N/A: system does not have CHW activity planning and scheduling

SECTION EUA-F: AGGREGATE REPORTING		
If the CHW is using an electronic system that allows aggregate data entry, use the following tool to assess the basic usability of the electronic system used by the CHWs.		
EUA_011	Can the CHW access aggregate reports generated by the eCHIS?	1. Yes, observed 2. No

AGE AND SEX-DISAGGREGATED DATA		
EUA_012	Can the CHW show eCHIS-generated reports that are disaggregated by age?	1. Yes, observed 2. No
EUA_013	Can the CHW show eCHIS-generated reports that are disaggregated by sex?	1. Yes, observed 2. No

DATA VISUALIZATION AND ANALYSIS			
EUA_014	Select two indicators from the national CHIS.		
	01	Indicator 1 _____	
	02	Indicator 2 _____	
EUA_015	Can the CHW use the eCHIS to present data in time-trend or bar graphs?		
	01	Indicator 1	1. Yes, observed 2. No
	02	Indicator 2	1. Yes, observed 2. No
EUA_016	Can the CHW use the eCHIS to visualize data, using graphs to compare indicators or villages/subunits? Check whether the two indicators use graphs for comparison.		
	01	Indicator 1	1. Yes, observed 2. No
	02	Indicator 2	1. Yes, observed 2. No

CHW's PERSPECTIVE ON THE ELECTRONIC DATABASE		
EUA_017	How do you classify/rate the eCHIS software, based on your experience?	1. Easy to use 2. Moderate 3. Difficult to use 4. N/A
EUA_018	Would you like to see any improvements in the eCHIS software?	1. Yes 2. No 3. N/A

EUA_019	If *yes*, please outline/describe the improvements you would like to see. _____ _____ _____ _____ _____ _____ _____

EUA_202	**INTERVIEW END TIME** (Use the 24-hour clock system)	:

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